

City of Broomfield

U.S. 36
SUB-AREA PLAN

MAY, 1997

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PREPARED FOR:



City of Broomfield



PREPARED BY:



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1. INTRODUCTION

PURPOSE OF THE U.S. 36 SUB-AREA PLAN:

...TO ENVISION, ESTABLISH, AND MAINTAIN A QUALITY SOUTHERN "GATEWAY" INTO THE CITY OF BROOMFIELD FOR ALL USERS ALONG U.S. HIGHWAY 36.

THE CITY OF BROOMFIELD RECENTLY ACCOMPLISHED AN UPDATE TO THE MASTER PLAN (NOVEMBER, 1995) TO GUIDE AND FOSTER THE FUTURE OF THE CITY. THE **U.S. 36 SUB-AREA PLAN** IS A COMPLEMENT TO THE MASTER PLAN — A MORE DETAILED FOCUS ON THE IMMEDIATE AND ULTIMATE LAND USES, KEY DEVELOPMENT PATTERNS AND IMPORTANT NATURAL RESOURCES ALONG THE CITY'S CRITICAL U.S. 36 HIGHWAY CORRIDOR.

THE PURPOSE OF THE PLAN IS TO HELP ACHIEVE COMMON GOALS OF:

- CREATING A QUALITY "GATEWAY IMAGE" CONVEYING THE VALUES OF THE BROOMFIELD
- COMMUNITY
- ESTABLISHING A BALANCE OF COMPLEMENTARY LAND USES
- MAINTAINING ECONOMIC STABILITY THROUGH VALUE-CREATION AND VALUE-RETENTION COORDINATING PLANNING FOR INFRASTRUCTURE
- FACILITATING AN ONGOING DIALOG AMONG LANDOWNERS, GOVERNMENTS, AND OTHERS
- FOR COMMUNICATION AND COOPERATION DURING DEVELOPMENT.

THE U.S. 36 SUB-AREA PLAN AND DESIGN STANDARDS WILL BE USED BY:

- LAND OWNERS THROUGHOUT THE AREA
- VARIOUS BROOMFIELD AGENCIES AND REFERRAL AGENCIES, AS WELL AS

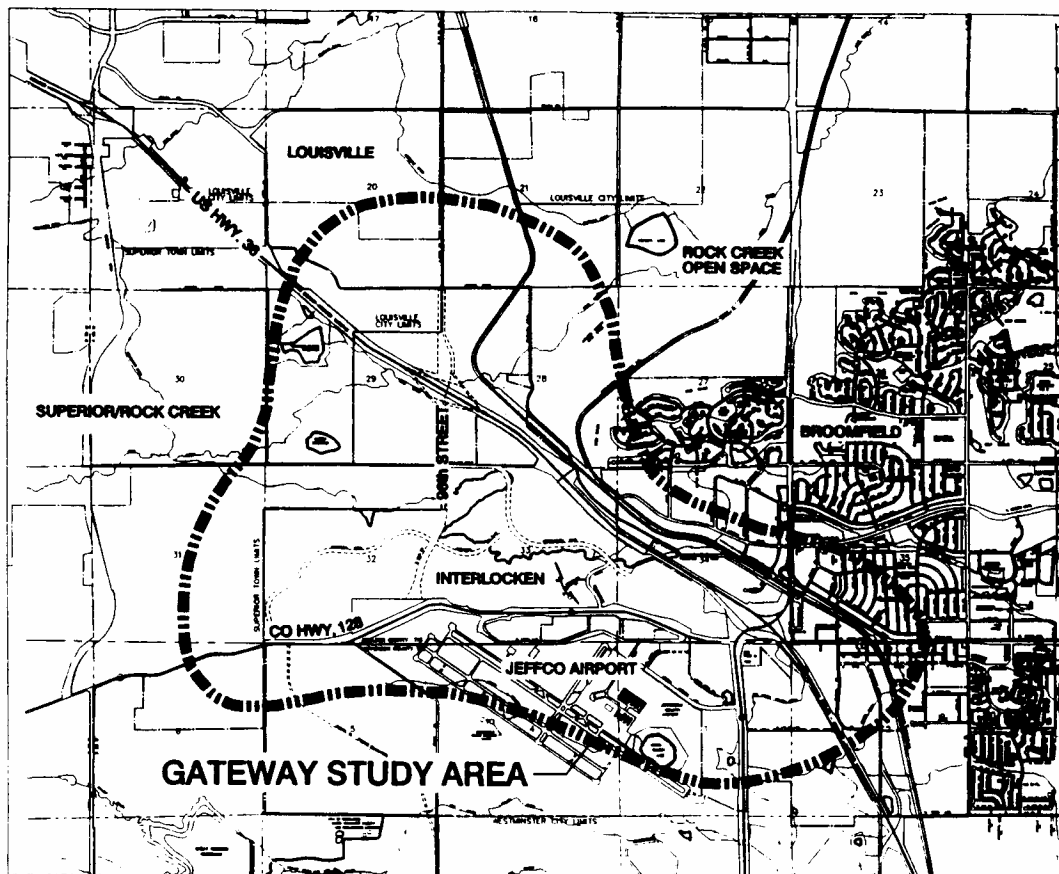
OTHER LOCAL

- GOVERNMENTS
- MARKETING REPRESENTATIVES
- ECONOMIC DEVELOPMENT ENTITIES
- PROSPECTIVE DEVELOPERS AND USERS OF THE AREA SERVICE PROVIDERS, SUCH AS UTILITY COMPANIES
- MEDIA AND OTHER SPECIAL INTEREST GROUPS.

LIKE BROOMFIELD'S NEW MASTER PLAN, THE U.S. 36 SUB-AREA PLAN IS TO BE AN "EVOLVING" DOCUMENT TO BE REVIEWED AND UPDATED AS THE AREA PROGRESSES. THE SUB-AREA PLAN IS A TOOL TO ENVISION, COMMUNICATE, PREDICT, AND RESPOND TO THE EXCITEMENT AND POTENTIAL OF THE CITY'S U.S. 36 "GATEWAY DISTRICT", AND TO ESTABLISH A VEHICLE TO MAINTAIN THE VISION FOR ALL USERS INTO THE 21 ST CENTURY.

THE U.S. 36 SUB-AREA PLAN IS AN ADVISORY DOCUMENT CITY OFFICIALS USE TO ASSIST IN THE PLANNING AND EVALUATION PROCESS AS THE CORRIDOR DEVELOPS. PORTIONS OF THIS REPORT WILL ALSO BE ADOPTED BY THE CITY AS AN INTEGRAL PART OF THE CITY'S ZONING AND DEVELOPMENT CODES.

THE STUDY AREA



THE U.S. 36 SUB-AREA PLAN STUDY AREA CONSISTS OF APPROXIMATELY 6,000 ACRES. (9 SQUARE MILES) AT THE SOUTHWESTERN EDGE OF THE CITY OF BROOMFIELD AND BOULDER COUNTY. AS ONE OF THE MOST STRATEGIC LOCATIONS IN THE DENVER METRO AREA AND ENTIRE ROCKY MOUNTAIN REGION, THE AREA REPRESENTS A MAJOR RESOURCE TO THE CITY OF BROOMFIELD AND SURROUNDING COMMUNITIES.

THE SUB-AREA OCCURS AT THE CROSSROADS OF TWO (2) MAJOR REGIONAL HIGHWAYS: U.S. 3 AND THE FUTURE NORTHWEST PARKWAY. THE NORTHWEST PARKWAY IS PROPOSED AS THE FUTURE NORTHWEST QUADRANT OF THE METRO

AREA BELTWAY SYSTEM. EVENTUALLY THIS SYSTEM WILL CONNECT TO C470 AT GOLDEN AND E470 AT INTERSTATE 25 TO THE NORTHEAST. IN ADDITION, THE SUB-AREA STUDY INCLUDES THE BROOMFIELD INTERCHANGE WHICH HAS BEEN IDENTIFIED AS A KEY AREA FOR NEAR FUTURE MAJOR UPGRADES TO THE HIGHWAY SYSTEM, COUPLED WITH REGIONAL TRANSPORTATION DISTRICT (RTD) TRANSIT FACILITY IMPROVEMENTS.

THE SUB-AREA PLAN STUDY AREA REPRESENTS A STRATEGIC LINK BETWEEN THE ADVANCED TECHNOLOGIES COMPANIES AND INSTITUTIONS OF BOULDER COUNTY AND DOWNTOWN DENVER^ BETWEEN HIGH QUALITY

RESIDENTIAL COMMUNITIES AND
EMPLOYMENT CENTERS; BETWEEN
SHOPPING/ENTERTAINMENT CENTERS AND
MULTI-MODAL TRANSIT CORRIDORS; AND
BETWEEN MAJOR OPEN SPACE RESOURCES
AND VIEWS TO THE ROCKY MOUNTAINS. THE
AREA IS A "GATEWAY" TO THE BROOMFIELD
COMMUNITY AND THE REGION.

SUMMARY OF APPROACH

THE KEY TO THE SUB-AREA STUDY METHOD OF APPROACH IS "INTEGRATION" - INTEGRATING THE EXTENSIVE PREVIOUS STUDIES OF VARIOUS PARTS OF THE U.S. 36 CORRIDOR; INTEGRATING THE MAJOR DEVELOPMENT MASTER PLANS AND INDIVIDUAL PROJECT NEEDS; AND INTEGRATING THE TREMENDOUS CREATIVE ENERGY REPRESENTED BY ALL PARTIES INVOLVED IN THE U.S. 36 CORRIDOR PAST AND PRESENT.

THE KEY TO THE "INTEGRATED APPROACH" IS TO FOCUS ALL THE CREATIVE THOUGHTS, DEVELOPMENT IDEAS, AND INDIVIDUAL USER NEEDS INTO A "UNIFIED VISION".

FROM A UNIFIED VISION, THE AREA CAN BE COMPREHENSIVELY PLANNED. ALL INVESTMENTS CAN YIELD INCREASED BENEFIT TOWARD AN EFFICIENT, EXCITING AREA WITH EXTREME VITALITY AND ECONOMIC REWARD.

TOWARD THE "INTEGRATED PLANNED APPROACH" THE SUB-AREA STUDY TEAM PROCESS HAS FOCUSED ON A SERIES OF WORKSHOPS WITH AN AVERAGE OF 20 - 30 PARTICIPANTS REPRESENTING KEY OWNERSHIP GROUPS, VARIOUS CITY DEPARTMENTS, AS WELL AS A COMPLEMENTARY CONSULTANT GROUP WITH EXTENSIVE EXPERIENCE IN THE U.S. 36 CORRIDOR.

THE U.S. 36 SUB-AREA PLAN IS INTENDED TO CREATE A LONG RANGE "**VISION PLAN**" INCLUDING A MASTER LAND USE PLAN, TRANSPORTATION PLAN, AND TRANSIT SYSTEM PLAN WITH SUPPORTIVE **DESIGN STANDARDS** TO GUIDE FUTURE DEVELOPMENT OF THE "GATEWAY DISTRICT"

SOURCE DOCUMENTS

OVER 20 PREVIOUS AREA PLANNING INFLUENCE MAPS AND OTHER CURRENT PLANNING DOCUMENTS WERE USED AS RESOURCES AND REFERENCES DURING

THE SUB-AREA STUDY (SEE LIST OF SOURCE DOCUMENTS IN TECHNICAL APPENDIX SECTION)

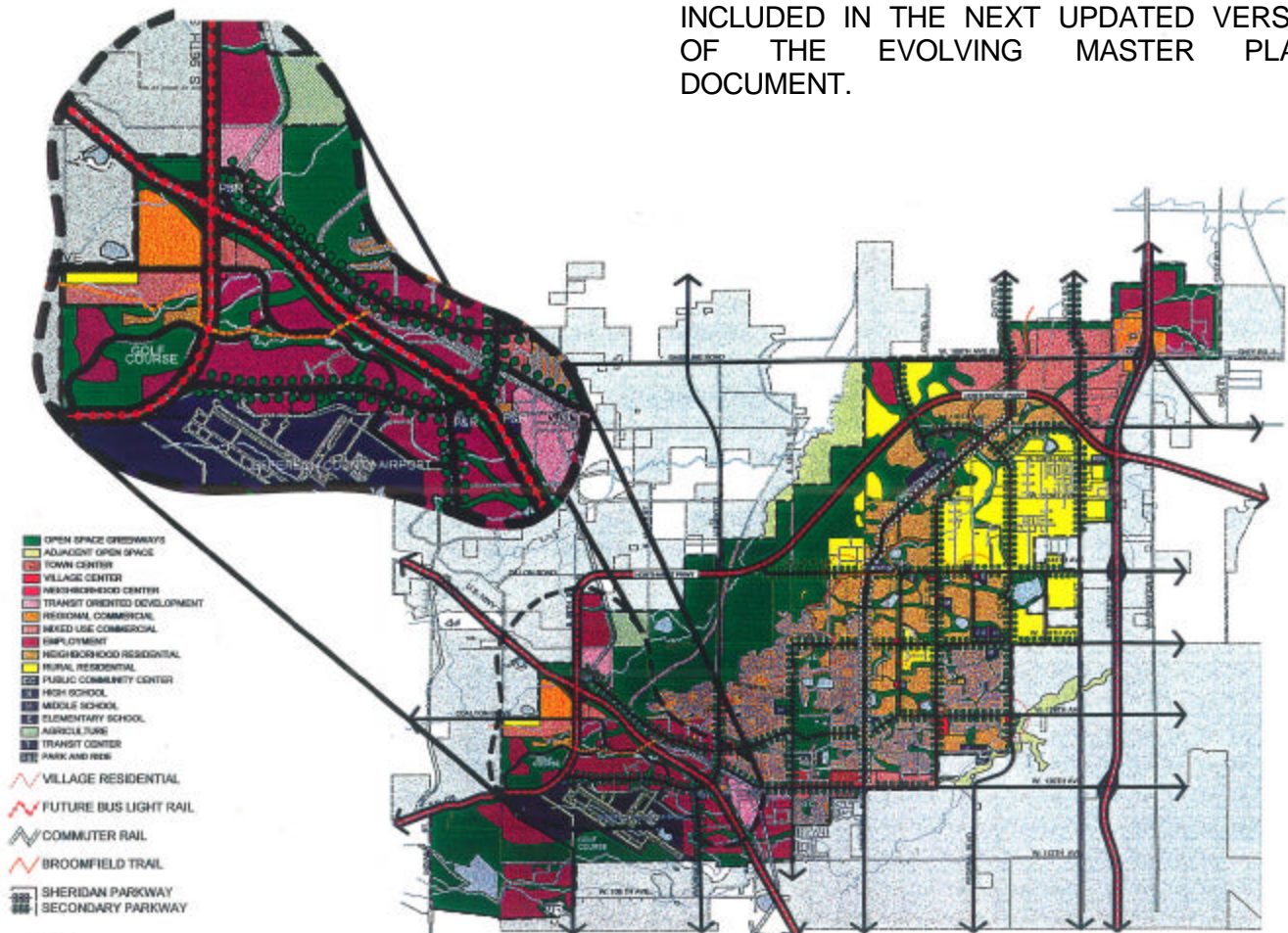
2- SUB-AREA LAND USE PLAN

REFERENCE TO BROOMFIELD MASTER PLAN

THE U.S. 36 SUB-AREA PLAN IS A MORE DETAILED STUDY OF A KEY "PIECE" OF THE BROOMFIELD MASTER PLAN, WHICH IS IN ESSENCE THE SOUTHERN "WINDOW" INTO THE CITY. THE BROOMFIELD MASTER PLAN SHOWS EMPLOYMENT LAND USES ALONG THE U.S. 36 CORRIDOR WITH POCKETS OF TRANSIT ORIENTED DEVELOPMENT, REGIONAL COMMERCIAL, VARIOUS MIXED USE COMMERCIAL AS WELL AS OPEN SPACE AREAS, AND A FEW NEIGHBORHOOD RESIDENTIAL ZONES. WITHIN THE

FRAMEWORK OF THE OVERALL MASTER PLAN, THE SUB-AREA STUDY FOCUSES ON SPECIFIC LAND USE INFLUENCES SUCH AS EXISTING OWNERSHIPS, DEVELOPMENT PLANS IN PROGRESS, NATURAL FEATURES (SUCH AS TOPOGRAPHY/VIEWS/DRAINAGE/ETC.), CIRCULATION, AND ACCESS REQUIREMENTS.

OUT OF THE MORE DETAILED SUB-AREA STUDY PROCESS, A FEW MINOR REFINEMENTS TO THE MASTER PLAN ARE PROPOSED FOR AND INTENDED TO BE INCLUDED IN THE NEXT UPDATED VERSION OF THE EVOLVING MASTER PLAN DOCUMENT.



SUB-AREA COMPILATION OF PROPOSED DEVELOPMENTS

AS A RESULT OF THE STRATEGIC IMPORTANCE OF THE SUB-AREA LOCATION IN THE U.S. 36 CORRIDOR, MANY YEARS OF PLANNING AND DESIGN HAVE BEEN ACCOMPLISHED FOR MOST OF THE LAND IN THE STUDY AREA — IN BOTH PRIVATE AND PUBLIC REALMS. A COMPILATION OF EACH

OF THE INDIVIDUAL PROPOSED IMPROVEMENT PLAN PROJECTS OR ADJACENT DEVELOPMENT MASTER PLANS HAS BEEN ESSENTIAL TO THE STUDY. THESE GENERALLY INCLUDE THE FOLLOWING LIST OF COMPONENTS:

- JEFFCO AIRPORT MASTER PLAN
- STORAGETEK MASTER PLAN
- INTERLOCKEN PUD & GENERAL DEVELOPMENT PLANS
- ROCK CREEK/SUPERIOR MASTER PLAN
- WESTCOR MALL SITE INITIAL CIRCULATION CONCEPTS
- MIDLAND DEVELOPMENT PHASE 1 AND PHASE 2 CONCEPTS
- BALL AEROSPACE MASTER PLANS
- MIDWAY AND OTHER AREA ROADWAY IMPROVEMENT CONCEPTS
- BOULDER COUNTY OPEN SPACE AND TRAIL PLANS
- LOUISVILLE COMPREHENSIVE PLANS
- RTD/CLTY TRANSIT FACILITY PLANS
- U.S. 36 AND NORTHWEST PARKWAY CORRIDOR PLANS.

PROPOSED SUB-AREA LAND USE PLAN

IN OVERVIEW, THE MOST IMPORTANT ASPECT OF THE PROPOSED SUB-AREA LAND USE PLAN IS THE INTEGRATION OF THE VARIOUS PROJECTS AND INDIVIDUAL DEVELOPMENTS' MASTER PLANS WITHIN THE SUB-AREA INTO A "UNIFORM COHESIVE VISION" FOR THE CORRIDOR. THE PROPOSED SUB-AREA LAND USE PLAN REPRESENTS THE "LATEST THINKING" TOWARD AN INTEGRATED COHESIVE PLAN AND, FOR THE MOST PART, A CONSENSUS (OF KEY SUB-AREA LAND OWNERS) ON THE BEST ALTERNATIVES CREATING THE UNIFIED VISION.

WHILE MUCH OF THE SUB-AREA PROPERTY TO DATE HAS REMAINED UNDER UTILIZED OR VACANT, THE PROMINENT LOCATION PROVIDES THAT YEARS OF PLANNING HAVE POSITIONED THE AREA FOR OPTIMAL USE. MOST OF THE SUB-AREA PROPERTIES HAVE PREVIOUSLY ESTABLISHED LAND USE

DESIGNATIONS. THEREFORE, THE PROPOSED SUB-AREA LAND USE PLAN HAS FOCUSED, NOT ONLY ON ZONING ISSUES, BUT RATHER ON SPECIFIC ISSUES OF LAND USE COMPATIBILITY, KEY LAND AREA GEOMETRICS, IMPACTS OF LAND USES TO TRAFFIC PATTERNS AND INFRASTRUCTURE SYSTEMS, ACCESS ISSUES, VISIBILITY OF SITES, OPEN SPACE CORRIDORS, AND THE METHOD BY WHICH PROJECTS SHOULD "INTERCONNECT."

HIGHLIGHTS OF THE PROPOSED SUB-AREA LAND USE PLAN INCLUDE:

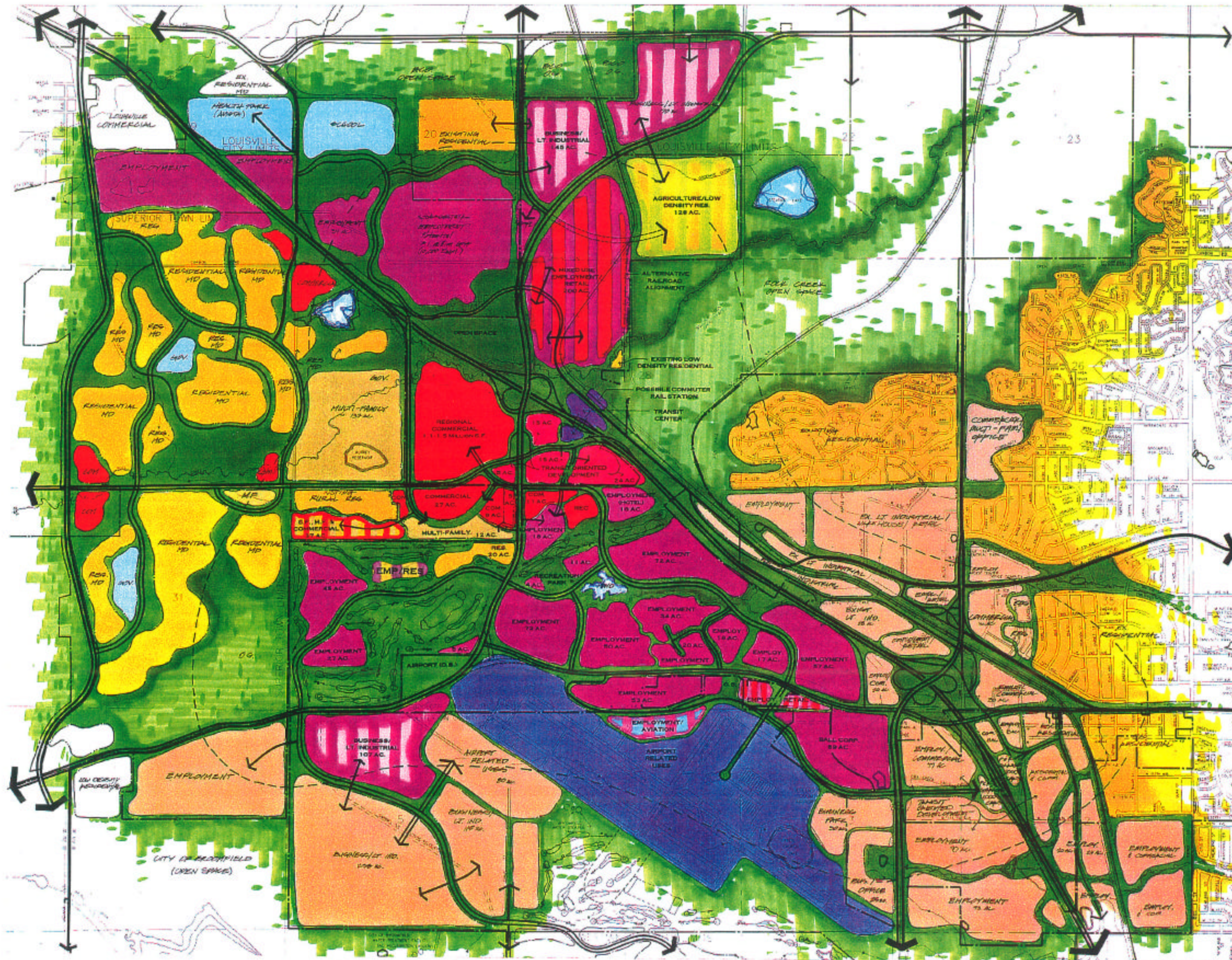
- ESTABLISHING, AT THE U.S. 36/96TH STREET INTERCHANGE, A HIGH QUALITY, MIXED-USE VILLAGE CENTER WITH TRANSIT-ORIENTED DEVELOPMENT AS AN INTEGRATED PART OF THE VILLAGE SUPPORTING "NON-VEHICULAR" CIRCULATION AS WELL AS EXCELLENT

VEHICULAR ACCESS ON TWO REGIONAL HIGHWAYS (INCLUDING DIRECTIONAL INTERCHANGE IMPROVEMENTS AND THE REALIGNMENT OF COALTON ROAD - SEE TRANSPORTATION AND TRANSIT SECTIONS).

- REALIGNING THE FUTURE NORTHWEST PARKWAY AS A MORE EFFICIENT AND MORE APPROPRIATE ROUTE ADJACENT TO ROCK CREEK OPEN SPACE CLARIFYING LAND USES, DEFINING OPEN SPACE ZONES AS AN AMENITY FOR EVERYONE TO ENJOY AND MAINTAINING SAFE AND EXPEDIENT ACCESS TO AND THROUGH THE REGION.
- CREATING A PHASE ONE "GATEWAY DISTRICT" AND A PHASE TWO AREA WHICH WILL BE A FOCUS OF FUTURE STUDY. THE PHASE ONE AREA INVOLVES THE KEY GATEWAY AREAS UNDER IMMEDIATE DEVELOPMENT PRESSURE.

THE PHASE TWO GATEWAY AREAS NEED FURTHER STUDY, BUT INDUCE A BROOMFIELD INTERCHANGE RE-CONSTRUCTION, CREATION OF A NEW SOUTH-EAST "GATEWAY" ENTRY INTO THE CITY AND IMPROVED DEVELOPABILITY FOR THE MIDWAY/INDUSTRIAL LANE AREA.

IN CONCLUSION, THE CITY CAN USE THE (PHASE ONE) SUB-AREA PLAN VISION AND DIRECTION AS A GUIDE TO THE IMMEDIATE REVIEW OF DEVELOPMENT PROJECTS IN THE AREA. THE CITY AND PRIVATE DEVELOPMENTS IN THE SUB-AREA GATEWAY DISTRICT SHOULD CONTINUE TO EVOLVE THE SUB-AREA PLANS FOR PHASE TWO AREAS. ALL AVENUES OF PRIVATE/PUBLIC FUNDING, COST SHARING, REIMBURSEMENT PROGRAMS AND RELATIVE INCENTIVES TO WORK TOGETHER TOWARD A COMMON VISION SHOULD BE PERSUED.



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City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**PHASE ONE
LAND USE
PLAN**



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3. SUB-AREA TRANSPORTATION PLAN

STUDY OVERVIEW

A TRANSPORTATION PLAN WAS PREPARED FOR THE BROOMFIELD / US 36 SUBAREA IN CLOSE COORDINATION WITH THE LAND USE PLAN. MAJOR DEVELOPMENTS (SUCH AS INTERLOCKEN, STORAGETEK, PROPOSED REGIONAL MALL, ETC.) HAVE BEEN PROPOSED ON BOTH SIDES OF US 36 IN BROOMFIELD, LOUISVILLE, AND SUPERIOR. THE MAJOR NODES OF DEVELOPMENT ARE SHOWN DIAGRAMMATICALLY IN FIGURE 1 . THE PRELIMINARY LAND USE PLAN FOR THE SUBAREA WAS ANALYZED TO DETERMINE THE AMOUNT OF DAILY TRAFFIC THAT WILL BE GENERATED AT BUILD-OUT. THE TOTAL ACREAGE OF EACH DEVELOPMENT AREA WAS MEASURED AND A FLOOR AREA RATIO (FAR) ESTIMATED BASED ON THE TYPE OF DEVELOPMENT BEING PROPOSED. BY 2020 WHEN THE AREA HIGHLIGHTED IN FIGURE 1 IS EXPECTED TO BE BUILT-OUT, THERE WILL BE ALMOST 84,000 EMPLOYEES OCCUPYING APPROXIMATELY 22 MILLION SQUARE FEET OF BUILDING SPACE (NOT INCLUDING SUPERIOR). DAILY TRIPS FOR EACH NODE OF DEVELOPMENT WERE THEN ESTIMATED BASED ON NATIONAL TRIP GENERATION RATES FROM THE INSTITUTE OF TRANSPORTATION ENGINEERS. FIGURE 1 ALSO SHOWS THE DAILY TRAFFIC ASSOCIATED WITH EACH NODE. ADDING THE INDIVIDUAL NODES RESULTS IN A TOTAL OF APPROXIMATELY 300,000 DAILY TRIPS WHICH ARE FORECASTED TO BE GENERATED IN THE STUDY AREA (NOT INCLUDING SUPERIOR).

FIGURE 2 WAS CREATED TO SHOW THE GENERAL DIRECTIONAL DISTRIBUTION TO THE REST OF THE REGION FOR TRAFFIC GENERATED WITHIN THE STUDY AREA. VARIOUS PREVIOUS REPORTS HAVE

ESTIMATED THE DIRECTIONAL DISTRIBUTION FOR SEVERAL OF THE MAJOR NODES, AND THESE WERE COMBINED TO DETERMINE AN AVERAGE DISTRIBUTION FOR THE STUDY AREA AS A WHOLE. INDIVIDUAL DISTRIBUTIONS FOR EACH NODE WERE STILL USED IN THE ANALYSES, AS APPROPRIATE. THE PRIMARY DIRECTION OF TRAVEL IS EXPECTED TO BE TO THE SOUTH AND EAST OF THE STUDY AREA. ALMOST 40 PERCENT OF THE TRAFFIC WILL BE ORIENTED SOUTHEAST TO THE VARIOUS REGIONAL FACILITIES (US 36, US 287, AND SH 121) PROVIDING SERVICE TO THE DENVER AREA. ANOTHER 25 PERCENT WILL BE ORIENTED TO THE BOULDER/LOUISVILLE AREA. THE OTHER MAJOR FACILITY IS THE NORTHWEST PARKWAY, WHICH WILL RECEIVE APPROXIMATELY 15 PERCENT TO BOTH THE NORTH AND THE SOUTH.

THERE ARE SEVERAL CONCLUSIONS THAT CAN BE DRAWN FROM AN ANALYSIS OF THE POTENTIAL TRAFFIC VOLUMES AND THEIR DISTRIBUTION. THE FORECASTED DAILY TRAFFIC VOLUMES FOR THE STUDY AREA WILL REQUIRE A DIVERSE NETWORK OF ROADWAYS TO SERVE THE AREA. CURRENTLY, MUCH OF THE TRAFFIC TO THE AREA IS ORIENTED TO US 36. US 36 WILL CONTINUE TO BE A KEY ACCESS LINK IN THE FUTURE, BUT THERE IS THE NEED TO SUPPLEMENT THIS WITH OTHER CONNECTIONS. SECONDARILY, THIS LARGE NUMBER OF FORECASTED EMPLOYEES (84,000) MEANS THAT ALTERNATIVE MODES OF TRAVEL OTHER THAN THE AUTOMOBILE SHOULD BE EFFECTIVE IN DECREASING THE AMOUNT OF AUTOMOBILE TRAFFIC. AS DETAILED IN A LATER SECTION, TWO TRANSPORTATION CENTERS ARE PLANNED

FOR THE AREA. IN ADDITION, THE CITY AND MAJOR EMPLOYERS SHOULD JOINTLY DEVELOP A TRAVEL DEMAND MANAGEMENT (TDM) PROGRAM TO ENCOURAGE ALTERNATIVE MODES. A COMPREHENSIVE PROGRAM CAN BE EXPECTED TO REDUCE TRAFFIC VOLUMES BY 5 TO 15 PERCENT (DEPENDING ON THE* TYPE OF TRIP AND THE TIME IT IS MADE).

THE PROPOSED SUBAREA TRANSPORTATION PLAN SHOWING EXISTING AND PROPOSED NEW ROADWAYS AND OTHER FACILITIES IS DEPICTED IN FIGURE 3. THIS PLAN INCLUDES TWO MULTI-MODAL TRANSPORTATION CENTERS (BROOMFIELD PARK-N-RIDE AND 96TH STREET) AS WELL AS THE CURRENT AND PROPOSED MAJOR ROADWAY SYSTEM WHICH WILL SERVE THE AREA. IMPLICIT IN THE PLAN IS A RECONSTRUCTION OF THE BROOMFIELD INTERCHANGE AND IMPROVEMENT OF THE BROOMFIELD PARK-N-RIDE. THIS COMPLEX IS WHERE US 36, US 287, SH 121, AND SH 128 ALL CONNECT, AND THE PARK-N-RIDE IS LOCATED ON THE SOUTHEAST CORNER OF THE INTERSECTION OF SH 121 AND SH 128. CURRENTLY, THIS INTERCHANGE COMPLEX IS HEAVILY CONGESTED DURING PEAK HOURS AND IMPROVEMENTS HAVE BEEN IDENTIFIED AS BROOMFIELD'S HIGHEST PRIORITY. BROOMFIELD HAS BEEN SUCCESSFUL IN GETTING REGIONAL FUNDS COMMITTED IN THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP) TO STUDY THIS BADLY NEEDED IMPROVEMENT.

BROOMFIELD AND RTD HAVE INITIATED AN EARLY-ACTION, CONCEPTUAL STUDY TO COORDINATE THE REBUILDING OF BOTH OF THESE CLOSELY-SPACED FACILITIES.

THE PLAN ALSO INCLUDES EXPANDED ACCESS TO US 36. THE PROPOSED REGIONAL MALL AND RELATED COMMERCIAL ACTIVITY ON EACH SIDE OF 96TH STREET TO THE SOUTH OF US 36 ARE HIGH TRAFFIC GENERATORS, AND PLANNING FOR NEW ACCESS OPPORTUNITIES WILL BE A KEY TO THEIR SUCCESS. THE NEW ACCESS LOCATION, CONFIGURATION, AND INTERACTION WITH 96TH STREET WERE A MAJOR FOCUS OF THE ANALYSES FOR THIS STUDY. A NUMBER OF ALTERNATIVES WERE SCREENED IN THIS PROCESS, AND THESE ARE DISCUSSED IN MORE DETAIL IN THE TRAFFIC APPENDIX.

ANOTHER CONCERN THAT BECAME APPARENT DURING THE STUDY IS THE INTERSECTION OF 96TH STREET AND INTERLOCKEN BOULEVARD/COALTON ROAD. A SIGNIFICANT AMOUNT OF THE TRAFFIC GENERATED BY THE INTERLOCKEN AREA USES THIS INTERSECTION, AND THERE IS THE NEED TO PROVIDE ALTERNATIVES FOR TRAFFIC GENERATED BY THE NEW COMMERCIAL DEVELOPMENT. SEVERAL ALTERNATIVES INVOLVE RELOCATING COALTON ROAD AND TYING IT INTO THE NEW US 36 ACCESS TO RELIEVE PRESSURE ON THIS INTERSECTION.

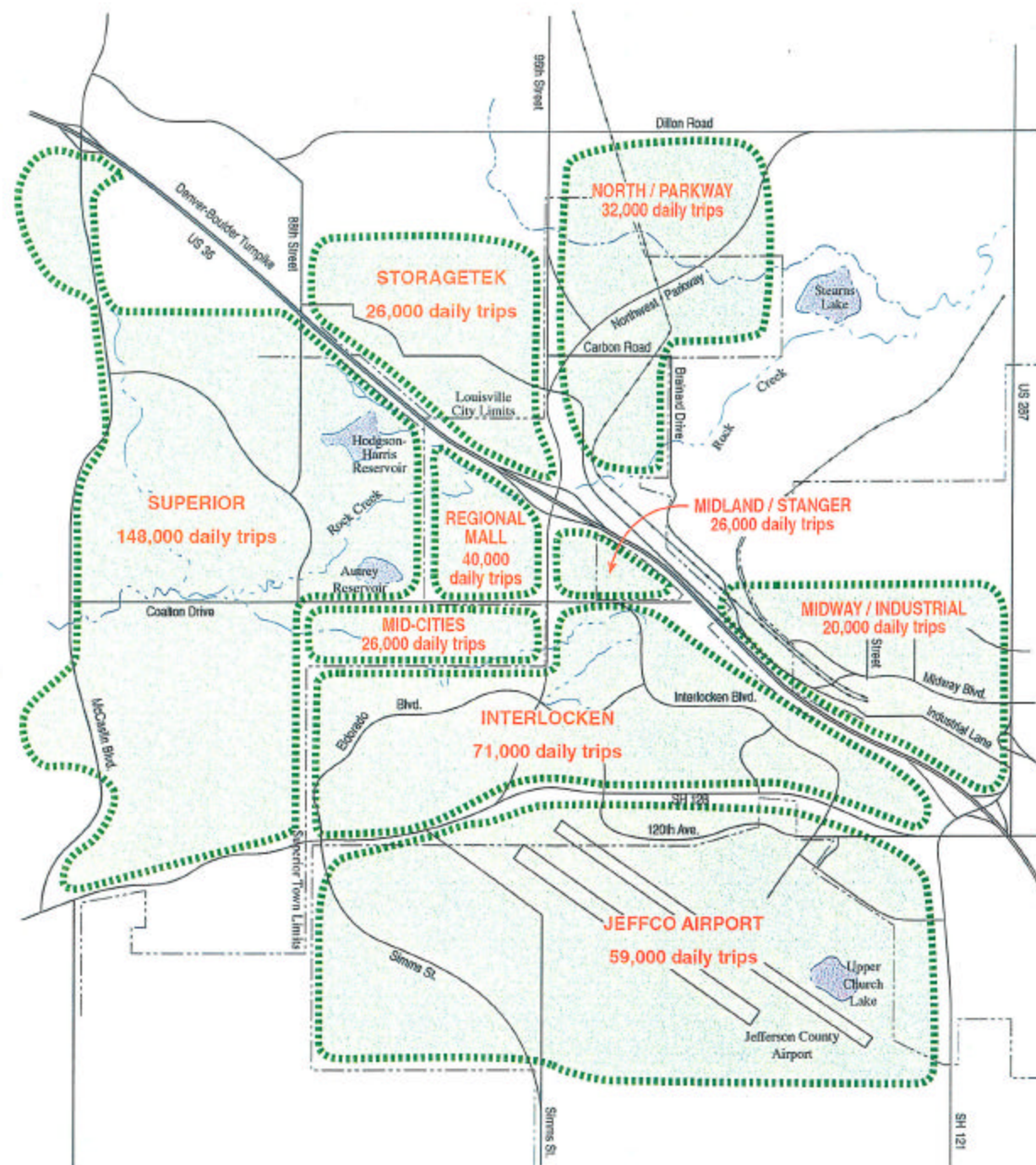


Figure 1
Daily Vehicle Trip Generation at Buildout

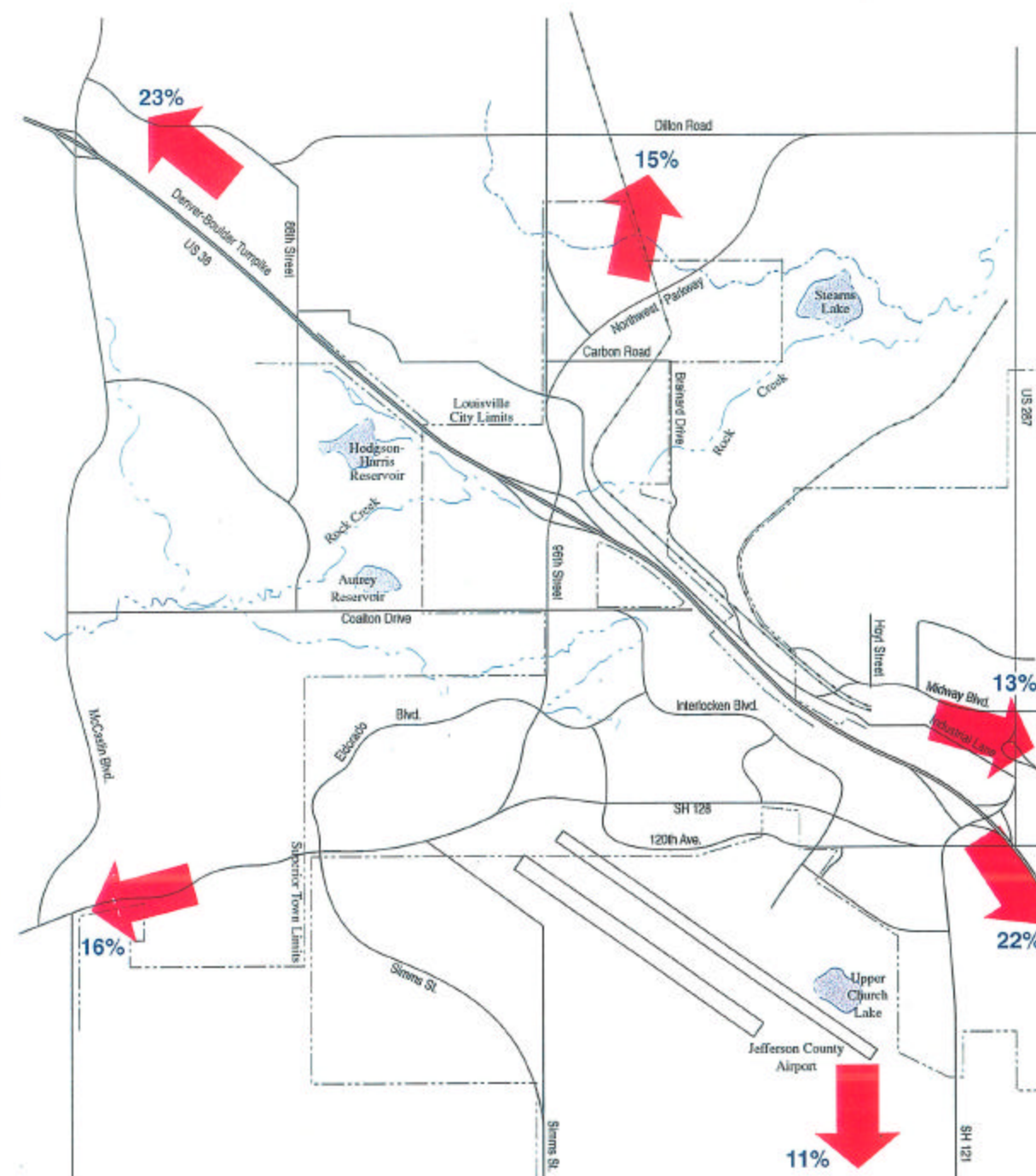


Figure 2
Directional Distribution of Trips



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City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**DAILY VEHICLE
TRIPS AND
DISTRIBUTION
PLANS**



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EXISTING AND PROPOSED TRANSPORTATION SYSTEM

THE EXISTING AND PLANNED FACILITIES AND THEIR INTERACTION WITH THE STUDY AREA ARE DESCRIBED AS FOLLOWS:

- **US 36** - US 36 IS THE SOLE FREEWAY IN THE STUDY AREA AND PROVIDES A DIRECT CONNECTION BETWEEN BOULDER AND DENVER. SINCE ITS CONSTRUCTION IN THE 1950'S, COMMUNITIES ALONG US 36 (SUCH AS BROOMFIELD, LOUISVILLE, SUPERIOR, WESTMINSTER, ETC.) HAVE GROWN DRAMATICALLY. DRCOG'S REGIONAL TRANSPORTATION PLAN (RTF) INCLUDES AN EXTENSION OF THE BUS/HOV LANE WEST OF THE BROOMFIELD PARK-N-RIDE. NO EXTENSION FARTHER WEST OR OTHER CAPACITY IMPROVEMENTS TO US 36 ARE INCLUDED IN REGIONAL PLANS. COMMUNITIES ALONG US 36 HAVE SIGNED AN INTERGOVERNMENTAL AGREEMENT TO WORK COOPERATIVELY TO PROMOTE A NUMBER OF IMPROVEMENTS IN THE CORRIDOR, INCLUDING EXTENDING THE BUS/HOV LANE ALL THE WAY TO BOULDER. BOULDER COUNTY IS CURRENTLY UNDERTAKING AN ALTERNATIVES ANALYSIS FOR THE CORRIDOR WHICH SHOULD BE COMPLETE IN THE NEAR FUTURE. IT IS CLEAR THAT ADDITIONAL CAPACITY ON US 36 WILL BE NECESSARY IN ORDER TO SERVE THE DEVELOPMENT WHICH IS BEING PROPOSED IN THE STUDY AREA, AS WELL AS ELSEWHERE ALONG THE US 36 CORRIDOR.
- **NORTHWEST PARKWAY** - THIS ROADWAY IS INCLUDED IN THE REGIONAL TRANSPORTATION PLAN AS AN EXPRESSWAY. THE FACILITY WILL ULTIMATELY HAVE FOUR THROUGH LANES FOR MOST OF ITS LENGTH, ALTHOUGH CERTAIN SEGMENTS MAY HAVE SIX LANES. IT WILL PROVIDE A LINK

BETWEEN C-470 IN GOLDEN AND THE FUTURE E-470 INTERCHANGE WITH I-25 IN THE VICINITY OF 160TH AVENUE, WHERE IT WILL END AT I-25 IN THE FUTURE. TO THE GREATEST EXTENT POSSIBLE, THE NORTHWEST PARKWAY WILL UTILIZE EXISTING FACILITIES FOR ITS ALIGNMENT. THROUGH THE SOUTHERN PORTION OF THE STUDY AREA, IT WILL COINCIDE WITH 96TH STREET AND SH-128. PLANNING AND CONSTRUCTION OF 96TH STREET THROUGH INTERLOCKEN HAS RECOGNIZED THE FUTURE USE OF THIS ROADWAY AS A SEGMENT OF THE PARKWAY. NORTH OF US 36, IT WILL INITIALLY USE 96TH STREET AND DILLON ROAD. AT SOME TIME IN THE FUTURE WHEN THESE TWO ROADS NO LONGER HAVE SUFFICIENT CAPACITY (THEIR INTERSECTION IS A PARTICULAR CONCERN), A NEW DIAGONAL ALIGNMENT (AS SHOWN IN FIGURE 3) WILL BE CONSTRUCTED.

- **NEW ACCESS TO US 36** - EXTENSIVE ANALYSES AND COORDINATION WITH PROPERTY OWNERS DETERMINED THAT NEW DIRECTIONAL RAMPS OFF US 36 WOULD BEST SERVE THE ACCESS NEEDS OF THE STUDY AREA. OTHER ACCESS CONFIGURATIONS WHICH WERE ANALYZED INCLUDED BRAIDED RAMPS AND SEVERAL CONCEPTS UTILIZING COLLECTOR/DISTRIBUTOR ROADS. THE DIRECTIONAL RAMPS WOULD BE LOCATED ON EACH SIDE OF 96TH STREET, MORE THAN ONE-HALF MILE AWAY TO REDUCE CONCERNS ABOUT THE SPACING OF THE RAMPS ALONG US 36. ON THE WEST, RAMPS TO AND FROM THE WEST WOULD BE LOCATED APPROXIMATELY 0.6 MILES WEST OF 96TH STREET AND WOULD TIE TO A NEWLY CONSTRUCTED ARTERIAL ON

THE 92ND STREET ALIGNMENT. THIS NEW ARTERIAL IS ON THE WEST SIDE OF THE PROPOSED REGIONAL MALL AND WOULD PROVIDE ACCESS TO THE WEST SIDE OF THE MALL. 92ND STREET WOULD END ON THE SOUTH AT COALTON ROAD AND WOULD PROVIDE ALTERNATIVE ACCESS FOR DEVELOPMENT ALONG COALTON ROAD IN EACH DIRECTION.

- **RELOCATED COALTON ROAD** - RELOCATING COALTON ROAD TO THE NORTH OF ITS CURRENT ALIGNMENT PROVIDES SEVERAL ADVANTAGES. AS MENTIONED PREVIOUSLY, THE INTERSECTION OF INTERLOCKEN BOULEVARD/COALTON ROAD AND 96TH STREET WILL BE THE FOCUS OF A LARGE AMOUNT OF THROUGH AND TURNING TRAFFIC IN THE FUTURE. PROVIDING RELIEF TO THIS INTERSECTION GREATLY IMPROVES CIRCULATION IN THE AREA SOUTH OF US 36. BY CONNECTING WITH THE EASTERLY DIRECTIONAL RAMPS, IT PROVIDES A WAY FOR TRAFFIC FROM THE MALL, COMMERCIAL AREAS, INTERLOCKEN, AND SUPERIOR TO ACCESS US 36 DIRECTLY. IN ADDITION, THE NEW ROAD WOULD PROVIDE THE OPPORTUNITY FOR AN ALTERNATIVE ACCESS POINT ALONG 96TH STREET TO THE NEW COMMERCIAL ACTIVITY NORTH OF INTERLOCKEN BOULEVARD. IN ADDITION, IT PROVIDES AN ALTERNATIVE PATH FOR CIRCULATION WITHIN THIS HIGHLY DEVELOPED AREA.

THE LOCATION WHERE THE RELOCATED COALTON ROAD WOULD CROSS 96TH STREET AND THE CONFIGURATION OF THE CONNECTING RAMPS BETWEEN THE ROADS HAVE NOT BEEN FINALIZED. PROJECTS IN THIS VICINITY MUST PROVIDE FOR THE FINALLY SELECTED ALTERNATIVE. THE LOCATION OF THE CROSSING DEPENDS ON THE USES AND CONFIGURATION PROPOSED FOR THE ADJACENT PARCELS, DRAINAGE CONCERNS, AND THE AMOUNT OF REGRADING REQUIRED ON THE PROPERTY. A NUMBER OF

"INTERCHANGE" CONFIGURATIONS WERE REVIEWED, INCLUDING LOOP RAMPS, HALF-DIAMOND RAMPS, AND RIGHT-IN/RIGHT-OUT CONFIGURATIONS. THE MAJOR CONCERN IS PROVIDING ADEQUATE SPACING TO THE 96TH STREET INTERCHANGE WITH US 36. THE RIGHT-IN/RIGHT-OUT ALTERNATIVE IS SHOWN IN FIGURE 3, BUT THE FINAL CONFIGURATION WILL RESULT FROM MORE DETAILED PLANNING EFFORTS.

- **96TH STREET INTERCHANGE UPGRADE** - THE DIRECTIONAL RAMP CONFIGURATION WHICH IS BEING RECOMMENDED FOR THE NEW ACCESS TO US 36 ALLOWS THE OPPORTUNITY TO RECONSTRUCT THE EXISTING INTERCHANGE AT 96TH STREET AS A PARTIAL CLOVERLEAF IN THE FUTURE. THIS OPTION HAS BEEN INCLUDED IN THE PLANNING FOR ALL TRANSPORTATION FACILITIES IN THE VICINITY AND IS SHOWN IN FIGURE 3.
- **MIDWAY BOULEVARD/INDUSTRIAL LANE** - THE BURLINGTON NORTHERN RAILROAD TRACKS (IN COMBINATION WITH US 36) REPRESENT A SIGNIFICANT BARRIER TO EAST-WEST TRAVEL IN BROOMFIELD. INDUSTRIAL LANE IS CURRENTLY THE ONLY CONNECTION BETWEEN THE AREA NORTH OF US 36 ALONG 96TH STREET AND THE PRIMARY RESIDENTIAL AREAS OF BROOMFIELD. ON THE EAST THIS CONNECTION IS MADE WHERE INDUSTRIAL LANE INTERSECTS WITH US 287 AT NICKEL STREET WITH AN AT-GRADE CROSSING OVER THE TRACKS. INDUSTRIAL LANE IS NOT ADEQUATE TO BE THE PRIMARY, LONG-TERM CONNECTION BECAUSE THIS EASTERN INTERSECTION CANNOT HANDLE HIGH VOLUMES AND INDUSTRIAL LANE'S PRIMARY FUNCTION IS TO PROVIDE ACCESS TO ADJACENT BUSINESSES. THE PLAN PROPOSES THAT MIDWAY BOULEVARD BE IMPROVED TO PROVIDE THIS CONNECTION. MIDWAY BOULEVARD CURRENTLY ENDS ON ITS WEST END AT THE RAILROAD TRACKS. IN

A PREVIOUS ANALYSIS, THE CITY DETERMINED THAT AN OVERPASS OVER THE TRACKS AT HOYT STREET WOULD BE THE BEST LOCATION FOR A NEW CONNECTION BETWEEN MIDWAY BOULEVARD AND INDUSTRIAL LANE. WHEN THIS FACILITY IS BUILT, INDUSTRIAL LANE TO THE WEST SHOULD BE REALIGNED SO THAT IT STAYS SOUTH AND WEST OF THE TRACK AND INTERSECTS 96TH STREET/NORTHWEST PARKWAY WHERE THE SOUTH ENTRANCE TO THE STORAGETEK COMPLEX HAS RECENTLY BEEN CONSTRUCTED.

- **JEFFCO AIRPORT ACCESS** - JEFFERSON COUNTY AIRPORT IS LOCATED ON THE SOUTHERN PORTION OF THE STUDY AREA AND HAS SEVERAL PRIMARY ACCESS POINTS ONTO SH 128. THEIR MASTER PLAN SHOWS SEVERAL ROADWAY CHANGES IN THE FUTURE. THE MAIN ENTRANCE FROM SH 128 ON THE EAST WILL BE RELOCATED TO BE OPPOSITE THE PLANNED INTERSECTION FOR INTERLOCKEN BOULEVARD. THE CURRENT ACCESS LOCATION FARTHER TO THE EAST WILL BE CLOSED OR MADE INTO A RIGHT-IN/RIGHT-OUT ONLY.

DISCUSSIONS ARE CURRENTLY UNDERWAY WITH THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) ABOUT RELOCATION OF THE

WEST ACCESS ROAD FROM SH- 128 SO THAT IT WILL ALIGN WITH A NEW ROAD INTO INTERLOCKEN. SIMMS BOULEVARD WILL BE RELOCATED WEST TO OPPOSITE ELDORADO BOULEVARD IN THE FUTURE WHEN ADDITIONAL RAMP AND HANGER SPACE IS NEEDED FOR THE AIRPORT.

ACCESS MANAGEMENT

ONE OF THE ELEMENTS OF PREPARING THE TRANSPORTATION PLAN WAS AN ACCESS MANAGEMENT COMPONENT. THE PURPOSE IS TO PRESERVE THE FUNCTIONALITY AND TO ENHANCE THE SAFETY OF THE TRANSPORTATION SYSTEM. THERE IS ALWAYS A TRADE-OFF BETWEEN ALLOWING ACCESS TO ADJACENT PROPERTIES AND DIMINISHING THE SAFETY AND CAPACITY OF THE ROADWAY FOR CARRYING THROUGH TRAFFIC. THE FUNCTIONAL PLAN SHOWN IN FIGURE 3 CREATES A HIERARCHY OF STREETS IN AN ATTEMPT TO CREATE A PROPER BALANCE BETWEEN ACCESS AND TRAFFIC CARRYING CAPACITY. TABLE 1 SHOWS ACCESS MANAGEMENT CRITERIA FOR THE VARIOUS CLASSIFICATIONS OF ROADWAYS INCLUDED IN THE SUBAREA PLAN. THIS INFORMATION INCLUDES SEPARATION DISTANCES FOR SIGNALIZED INTERSECTIONS, DISTANCES BETWEEN INTERSECTIONS AND ACCESS POINTS, AND BETWEEN TWO ACCESS POINTS.

Table 1
Access Management

	Northwest Parkway	Principle Arterial	Minor Arterial	Major Collector
Distance between signalized intersections ¹	1/2 mile	1/2 mile	1 /4 mile	
Minimum distance from access point to intersection	500 ft.	230 ft.	185 ft.	150 ft.
Minimum distance between access points	325 ft.	230 ft.	185 ft.	150 ft.

¹ To provide flexibility for both existing and future conditions, an approved engineering analysis should be made to properly locate any proposed access. These spacings may be adjusted with such an approved engineering analysis.

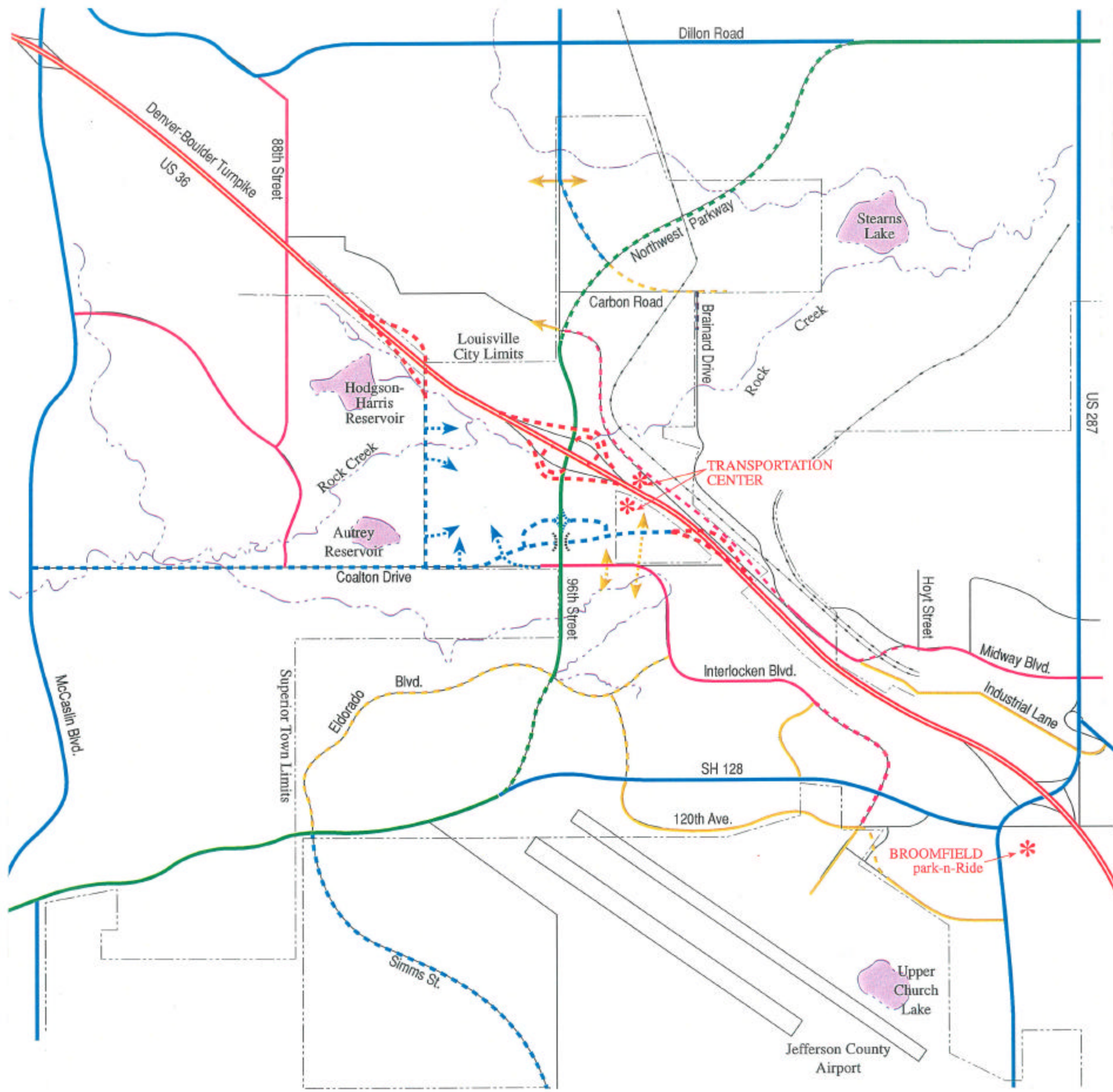


FIGURE 3

DT
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 PLANNING
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City of Broomfield

**U.S. 36
 SUB-AREA PLAN**

**PROPOSED
 SUB-AREA
 TRANSPORTATION
 PLAN**

FEET
 NOT TO SCALE

DATE: 4/22/97

4. SUB-AREA TRANSIT PLAN

OVERVIEW OF BROOMFIELD U.S. 36 SUB-AREA TRANSIT SYSTEM

THE STUDY AREA LIES ALONG ONE OF THE MOST IMPORTANT TRANSIT CORRIDORS IN THE DENVER REGION. NEARLY 10,000 PEOPLE PER DAY BOARD ONE OF THE RTD ROUTES RUNNING ON U.S. 36 AND OTHERS PATRONIZE CONNECTING ROUTES AND LOCAL CIRCULATORS.

THESE TRANSIT PATRONS ARE PRIMARILY PROFESSIONALS COMMUTING TO WORK IN DOWNTOWN DENVER, DOWNTOWN BOULDER, AND OTHER EMPLOYMENT CENTERS IN THE REGION AND STUDENTS COMMUTING BETWEEN JOBS AND CLASSES AT THE CU-BOULDER AND CU-DENVER CAMPUSES.

AT BUILD-OUT, THE STUDY AREA WILL EMPLOY OVER 60,000 PEOPLE, MANY OF WHOM WILL BE RESIDENTS OF THE DENVER METRO AREA CITIES. THE COMMUNITIES LYING ALONG THE CORRIDOR WILL SEE INCREASES IN POPULATION OF AT LEAST 50% BY 2020, AND MOST WILL SEE SUBSTANTIAL EMPLOYMENT GROWTH AS WELL. BY 2020, DAILY TRANSIT TRIPS WITHIN AND THROUGH THE STUDY AREA SHOULD APPROACH 50,000 BOARDINGS.

THE BROOMFIELD U.S. 36 SUB-AREA HAS THE POTENTIAL TO BECOME THE REGION'S PREMIER TRANSIT ACCESSIBLE DESTINATION (OUTSIDE OF DOWNTOWN DENVER). FULLY REALIZING THIS POTENTIAL WILL REQUIRE THAT A PEDESTRIAN-ORIENTED AND TRANSIT-SERVICEABLE ENVIRONMENT BE CREATED THROUGH THE COOPERATIVE EFFORT OF THE LANDOWNERS, THE CITY OF BROOMFIELD AND THE REGIONAL TRANSPORTATION DISTRICT. THIS WILL SAVE MILLIONS OF

DOLLARS IN PARKING, CAPITAL COSTS AND SET THE AREA APART AS A UNIQUE AND DESIRABLE PLACE TO WORK, SHOP, AND DINE.

IN THE FUTURE, THE U.S. 36 CORRIDOR FROM DENVER THROUGH BROOMFIELD WILL BECOME A MAJOR HIGH CAPACITY TRANSIT SPINE OF THE METROPOLITAN AREA, WITH:

- EITHER LIGHT RAIL OR COMMUTER RAIL SERVICE PARALLEL TO U.S. 36;
- HIGH OCCUPANCY VEHICLE (HOV) LANES WITH ASSOCIATED PARKING FACILITIES;
- REGIONAL EXPRESS BUS ROUTES (E.G., THE "B" ROUTE BETWEEN DOWNTOWN DENVER AND DOWNTOWN BOULDER, AND EXPRESS ROUTES TO DENVER INTERNATIONAL AIRPORT);
- LOCAL TRANSIT ROUTES CONNECTING THE SUB-AREA TO BROOMFIELD, SUPERIOR, LOUISVILLE, ARVADA, AND OTHER DENVER METRO AREA CITIES;
- A DAYTIME CIRCULATOR PROVIDING SERVICE BETWEEN EMPLOYMENT POINTS AND RETAIL AND RESTAURANT DESTINATIONS WITHIN THE SUB-AREA;
- A "ZIP" SHUTTLE PROVIDING A VERY HIGH LEVEL OF ATTRACTIVE AND FUN SERVICE BETWEEN THE REGIONAL SHOPPING MALL SITE AND U.S. 36 CORRIDOR PARKING FACILITIES.

THE ROUTES AND PARKING FACILITIES ARE BEING PLANNED IN A MANNER THAT WILL ENABLE THE STUDY AREA TO MAINTAIN A

HIGH LEVEL OF MOBILITY AND ACCESS REGARDLESS OF POTENTIAL FUTURE CONGESTION ON U.S. 36 OR OTHER AREA HIGHWAYS AND STREETS.

SPECIFIC COMPONENTS OF THIS FUTURE TRANSIT SYSTEM INCLUDE:

- **RAIL SERVICE** - BOTH LIGHT RAIL TRANSIT AND COMMUTER RAIL SERVICE ARE CURRENTLY PROPOSED FOR THE U.S. 36 CORRIDOR FROM DENVER THROUGH BROOMFIELD TO BOULDER. IT IS UNLIKELY BOTH WOULD BE DEVELOPED IN THE SAME CORRIDOR, BUT PLANNING FOR THE SUB-AREA HAS PRESERVED THE POTENTIAL FOR BOTH. PARKING FACILITIES, TRANSIT CENTERS, AND COLLECTION/DISTRIBUTION TRANSIT SERVICE HAVE BEEN PLANNED TO ENSURE THAT THE STUDY AREA MAXIMIZES THE BENEFITS FROM RAIL SERVICE. A SIMILAR CORRIDOR IN THE PORTLAND, OREGON METROPOLITAN AREA (THE MAX LRT LINE FROM DOWNTOWN PORTLAND TO GRESHAM) HAS INDUCED OVER A BILLION DOLLARS OF ASSOCIATED PRIVATE SECTOR DEVELOPMENT AROUND STATION AREAS ALONG THE ROUTE.

- **HOV LANES AND PARK-N-RIDE FACILITIES** - BOTH THE U.S. 36 CORRIDOR STUDY AND THE DENVER REGION'S LONG RANGE TRANSPORTATION PLAN CALL FOR EXCLUSIVE, DIRECTIONAL (BARRIER-PROTECTED) HOV LANES IN THE U.S. 36 CORRIDOR. INITIALLY THESE WILL BE BUILT AS FAR NORTH AS THE BROOMFIELD INTERCHANGE. LATER THEY WILL BE EXTENDED INTO BOULDER. PARK-N-RIDE FACILITIES ACCESSIBLE FROM THE HOV LANES WILL BE DEVELOPED AT BOTH THE BROOMFIELD INTERCHANGE AND THE 96TH STREET INTERCHANGE. THESE WILL INITIALLY BE ACCESSIBLE FROM THE REGULAR TRAVELED LANES (TO FUNCTION IN THE YEARS BEFORE THE BARRIER-PROTECTED LANES ARE

CONSTRUCTED) AND LATER WILL BE MODIFIED SLIGHTLY TO BE ACCESSIBLE FROM THE NEW, INTERIOR LANES. THIS TRANSITION IS BEING DESIGNED INTO BOTH INTERCHANGES AND BOTH SETS OF PARKING FACILITIES. MODERN, ATTRACTIVE DAY CARE CENTERS WILL BE LOCATED AT BOTH PARK-N-RIDE FACILITIES.

THE HOV/PARK-N-RIDE SYSTEM WILL SERVICE TRIPS COMING INTO THE STUDY AREA (CONNECTING WITH EMPLOYMENT DESTINATIONS VIA THE OTHER SERVICES DESCRIBED BELOW) AND WILL ALSO COLLECT PASSENGERS OUT-BOUND FOR OTHER DESTINATIONS IN THE REGION. BECAUSE OF THE DESIRABLE ECONOMIC PROFILE OF THE FUTURE HOV AND RAIL PATRONS, THE SUB-AREA PLAN SPECIFICALLY SEEKS TO CONNECT THEM - VISUALLY AND PHYSICALLY - WITH THE SHOPPING OPPORTUNITIES AVAILABLE IN THE STUDY AREA. THE PARK-N-RIDE FACILITIES WILL ULTIMATELY SERVE AS MULTIMODAL TRANSPORTATION CENTERS CONNECTING EXPRESS BUS SERVICES ON U.S. 36 AND THE NORTHWEST PARKWAY, THE RAIL SYSTEM, AND VARIOUS LOCAL TRANSIT SERVICES.

- **LOCAL TRANSIT** - SPECIAL LOCAL BUS ROUTES WILL PROVIDE IMPORTANT CONNECTIONS TO THE STUDY AREA. A BI-DIRECTIONAL BROOMFIELD LOOP WILL LINK INTERLOCKEN AND THE RETAIL DESTINATIONS WITH THE CORE AREAS OF THE CITY OF BROOMFIELD. A SUPERIOR CONNECTOR WILL LINK RESIDENTIAL AREAS NORTH AND WEST OF THE STUDY AREA WITH THE EMPLOYMENT DESTINATIONS. A DAYTIME CIRCULATOR WILL RUN FROM 7 AM TO 6 PM AND WILL PROVIDE AUTO-FREE MOBILITY FOR BUSINESS TRIPS WITHIN THE AREA, FOR NOON-TIME SHOPPING AND LUNCH TRIPS, AND FOR CONNECTIONS TO THE PARK-N-RIDE FACILITIES AT THE 96TH STREET

INTERCHANGE. FINALLY, A ZIP SHUTTLE USING INNOVATIVE ELECTRIC TRAMS WILL PROVIDE FUN, FAST, FREQUENT, AND FREE SERVICE BETWEEN THE 96TH STREET PARKING FACILITIES, THE REGIONAL MALL AND ASSOCIATED RETAIL DESTINATIONS. AS A RESULT, BUSINESS TRAVELERS WILL EASILY MOVE BETWEEN DENVER INTERNATIONAL AIRPORT, AREA HOTELS, EMPLOYMENT BUSINESS MEETINGS, SHOPPING AND RESTAURANTS - CHARACTERISTICS OF A WORLD-CLASS COMMERCIAL CENTER.



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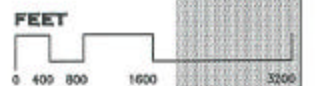
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City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**PROPOSED
TRANSIT
PLAN**



DATE: 4/22/97

TRANSIT PLAN

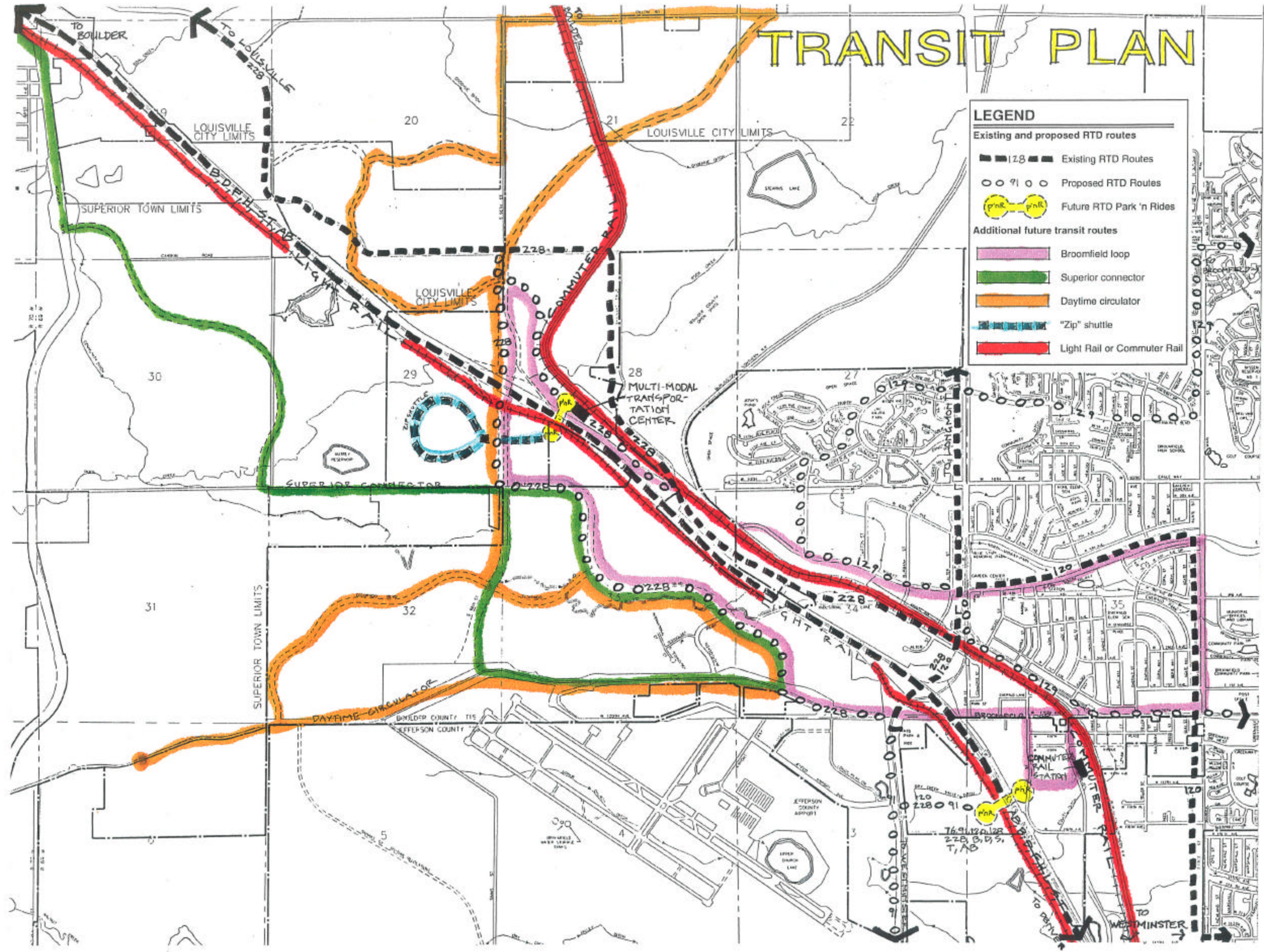
LEGEND

Existing and proposed RTD routes

- Existing RTD Routes (thick black dashed line)
- Proposed RTD Routes (thin black dashed line)
- Future RTD Park 'n Rides (yellow circle with 'PnR')

Additional future transit routes

- Broomfield loop (pink line)
- Superior connector (green line)
- Daytime circulator (orange line)
- "Zip" shuttle (blue line with 'Z')
- Light Rail or Commuter Rail (red line)



96TH STREET INTERCHANGE WITH ZIP SHUTTLE

THE REGIONAL SHOPPING MALL, ASSOCIATED RETAIL VENUES, HOTELS, RESTAURANTS, AND EMPLOYMENT CENTERS LOCATED IN THE VICINITY OF THE 96TH STREET INTERCHANGE WITH U.S. 36 WILL MAKE THIS ONE OF THE DENVER REGION'S MOST DESIRABLE MAJOR ACTIVITY CENTERS.

REGIONAL HIGH CAPACITY TRANSIT SERVICE WILL CONNECT DIRECTLY WITH A MULTIMODAL TRANSPORTATION CENTER DESIGNED INTO THE NORTHEAST QUADRANT OF THE INTERCHANGE, WITH ASSOCIATED PARK-N-RIDE FACILITIES PROVIDED ON BOTH SIDES OF U.S. 36. THE MULTIMODAL CENTER WILL CONNECT RAIL (EITHER COMMUTER RAIL OR LIGHT RAIL TRANSIT) PASSENGERS WITH REGIONAL BUS SERVICE, LOCAL TRANSIT ROUTES, AND PARKING.

PEDESTRIANS WILL BE ABLE TO WALK BETWEEN THE VARIOUS PARTS OF THE SYSTEM (ON EACH SIDE OF U.S. 36) BY WAY OF A SYSTEM OF ATTRACTIVE, WELL-LIT "TRAVELER CORRIDORS" UNDER U.S. 36 AND UNDER 96TH STREET. THESE TRAVELER CORRIDORS WILL ADAPT DESIGN CONCEPTS FROM FACILITIES IN ATLANTA, WASHINGTON DC, AND TORONTO, AND MAY INCORPORATE SOME AMOUNT OF COMMUTER SERVICES AND SHOPPING DIRECTLY INTO THE UNDERGROUND STRUCTURES.

THE TRAVELER CORRIDORS WILL ALSO ACCOMMODATE ELECTRIC TRAM (ZIP) SERVICE BETWEEN THE MULTIMODAL TRANSPORTATION CENTER AND THE REGIONAL SHOPPING MALL. CONSIDERATION WILL BE GIVEN TO BRINGING ZIP TRAMS DIRECTLY INTO A GROUND-LEVEL OR BELOW-GROUND PORTION OF THE REGIONAL MALL AND THE TRANSPORTATION CENTER, PROVIDING

WEATHER-FREE ACCESS BETWEEN THE VARIOUS REGIONAL AND LOCAL TRANSIT SYSTEMS AND THE MANY LOCAL DESTINATIONS.

THE DESIGN AND APPROACH TO TRANSIT SERVICE WILL BE UNPRECEDENTED NOT ONLY IN THE DENVER REGION, BUT IN THE WESTERN U.S., AND WILL ENSURE A LEVEL OF MOBILITY AND ACCESSIBILITY THAT ECLIPSES COMPETING DESTINATIONS.

THE DESIGN OF THE REGIONAL MALL, THE PROPERTIES EAST OF 96TH STREET, AND THE TRANSPORTATION CENTER WILL STRESS WALKABILITY AND WILL CAPITALIZE ON THE CONVENIENCE PROVIDED BY THE HIGH LEVEL OF TRANSIT SERVICE BY "STITCHING" THE VARIOUS TRANSIT ROUTES AND PEDESTRIAN FACILITIES DIRECTLY INTO THE SITE PLANS AND BUILDING LAYOUTS. THIS WILL PROVIDE SEAMLESS CONNECTIONS AND A PERCEPTION OF AN EXTREMELY WELL-PLANNED INTERFACE BETWEEN AUTOMOBILES, TRANSIT, AND WALKING. THIS WILL BE THE FIRST TRULY PEDESTRIAN-ORIENTED SUBURBAN ACTIVITY CENTER IN THE DENVER REGION.

THE ZIP SHUTTLES ARE ENVISIONED AS ELECTRIC (ZERO EMISSION) TRAMS SIMILAR TO THOSE OPERATED AT EPCOT CENTER IN ORLANDO AND AT CERTAIN SKI RESORTS (ALTHOUGH SOME OF THESE OTHER SYSTEMS ARE DIESEL-POWERED, WHICH IS INAPPROPRIATE FOR THIS LOCATION). THE SHORT TRAMS WILL BE COMPOSED OF TWO TO THREE CARS AND WILL BE DESIGNED AS AN ARTICULATED SYSTEM TO NEGOTIATE IN TIGHT SPACES WHILE AT THE SAME TIME OFFERING SUBSTANTIAL PEOPLE-MOVING CAPACITY. THE SERVICE THEME WILL BE "FUN, FAST, FREQUENT, AND FREE" AND THE SERVICE IS INTENDED TO BE INTEGRAL PART OF THE VISITOR EXPERIENCE.

BROOMFIELD INTERCHANGE AND PARK-N-RIDE

THE EXISTING BROOMFIELD INTERCHANGE IS ONE OF THE MOST IMPORTANT TRANSPORTATION FACILITIES IN THE DENVER REGION. OVER 60,000 VEHICLES FLOW THROUGH HERE EACH WEEKDAY, ALONG WITH NEARLY 10,000 TRANSIT PASSENGERS. FOUR STATE HIGHWAYS (U.S. 36, SR 128, SR 121, AND U.S. 287) COME TOGETHER AT THIS INTERCHANGE, PROVIDING ACCESS TO RAPIDLY-DEVELOPING PORTIONS OF BOULDER AND JEFFERSON COUNTIES.

THE INTERCHANGE WILL NOT BE ADEQUATE FOR FUTURE TRAFFIC DEMAND AND DOES NOT SUPPORT WALKING OR BICYCLING AT ALL. ACCESS TO THE HIGH-VISIBILITY LAND AREAS SOUTH OF THE INTERCHANGE ON BOTH SIDES OF U.S. 36 IS INADEQUATE, AND THE CURRENT INTERCHANGE DOES LITTLE TO CREATE AN APPROPRIATE IMAGE AS THE "FRONT DOOR" TO THE CITY OF BROOMFIELD AND THE U.S. 36 SUB-AREA. BUS AND AUTO ACCESS TO THE RTD PARK-N-RIDE FACILITY IS INEFFICIENT, TIME-CONSUMING, AND INCONVENIENT.

IN SPITE OF THE CURRENT DIFFICULT ACCESS, THE BROOMFIELD PARK-N-RIDE IS A WELL-UTILIZED FACILITY THAT IS STRATEGICALLY IMPORTANT BOTH TO THE U.S. 36 SUB-AREA AND TO THE REGION AS A WHOLE. CURRENT PARKING CAPACITY IS 627 CARS, BUT ACTUAL UTILIZATION SIGNIFICANTLY EXCEEDS THAT ON MOST WEEKDAYS.

THE PLAN FOR THIS INTERCHANGE CALLS FOR SOLVING THE MOST CRITICAL TRAFFIC BOTTLENECKS, INCLUDING THE LACK OF A CONNECTION BETWEEN 120TH AVENUE AND SH 128. THE CAPACITY OF THE INTERCONNECTIONS BETWEEN U.S. 36 AND U.S. 287 WILL BE IMPROVED AND LOCAL ROAD CONNECTIONS WILL BE PROVIDED IN AREAS WHERE LOCAL ACCESS IS ALMOST NON-EXISTENT TODAY.

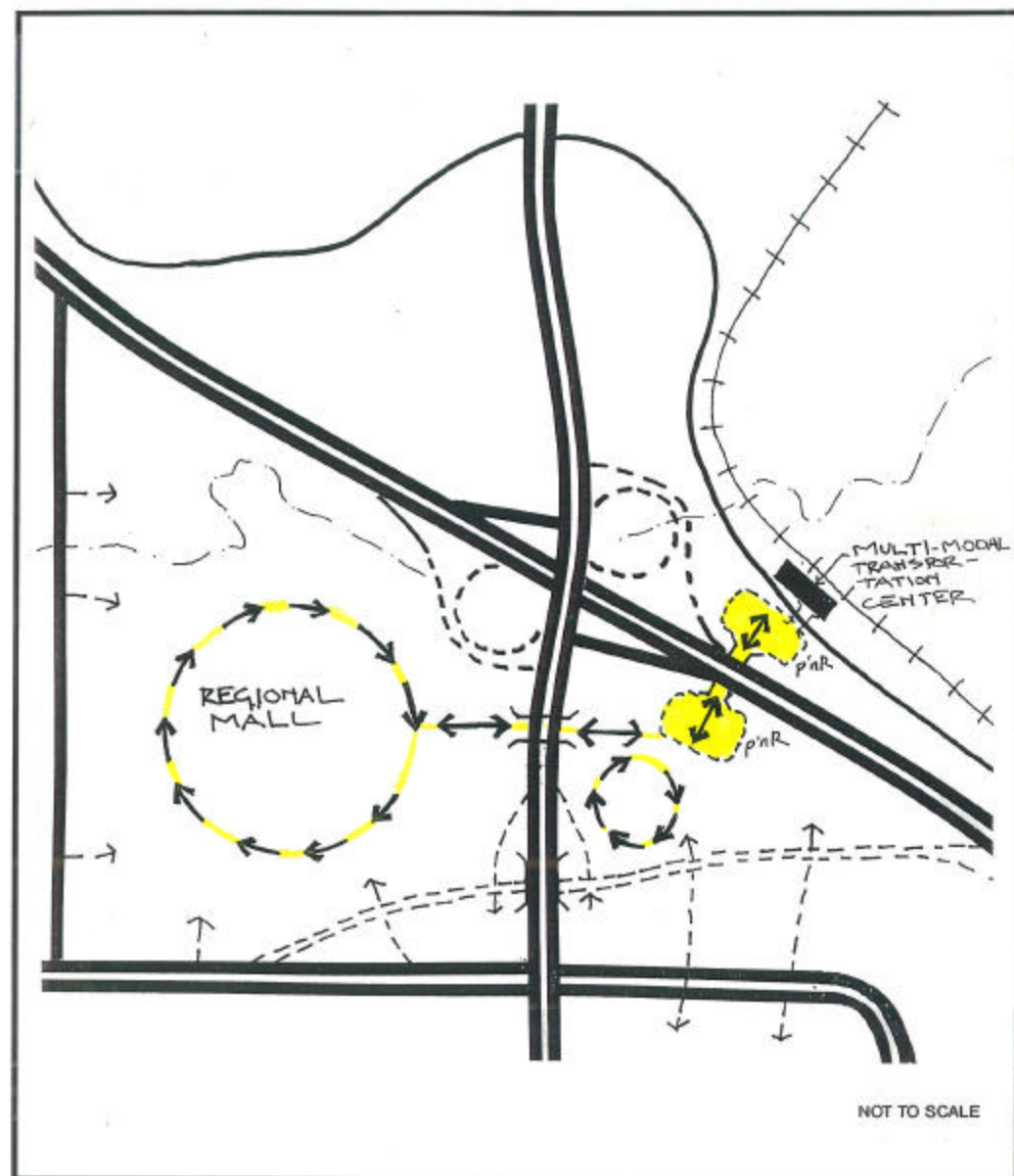
MORE IMPORTANTLY, HOWEVER, THE INTERCHANGE IS BEING PLANNED AS A MULTIMODAL FACILITY SUPPORTING A HIGH LEVEL OF MOBILITY AND ACCESS BY TRANSIT AND BY NON-MOTORIZED MEANS. THE BROOMFIELD PARK-N-RIDE FACILITY WILL BE RELOCATED AND POSITIONED TO SERVE AS A MAJOR ACCESS POINT FOR THE FUTURE HOV SYSTEM IN THE U.S. 36 CORRIDOR, AND AS A MAJOR ACCESS POINT TO THE FUTURE RAIL TRANSIT SYSTEM (EITHER COMMUTER RAIL OR LIGHT RAIL TRANSIT). MULTIMODAL PATHS WILL CIRCULATE THROUGH BOTH SIDES OF THE INTERCHANGE, PROVIDING ACCESS TO REGIONAL TRANSIT BY NON-MOTORIZED MEANS. SOMETHING BROOMFIELD RESIDENTS HAVE INDICATED A STRONG DESIRE TO SEE DEVELOPED.

PARKING CAPACITY WILL BE BOOSTED TO OVER 1,600 CARS AT BUILD-OUT. PEDESTRIANS WILL MOVE BETWEEN THE TWO SIDES OF U.S. 36 BY WAY OF AN ATTRACTIVE, WELL-LIT, UNDERGROUND "TRAVELER CORRIDOR." LIGHT RAIL SYSTEM ACCESS WOULD OCCUR IN THE HEART OF THE FACILITY ON THE SOUTHWEST SIDE. COMMUTER RAIL ACCESS WOULD BE A SHORT STROLL AWAY ON THE EAST SIDE.

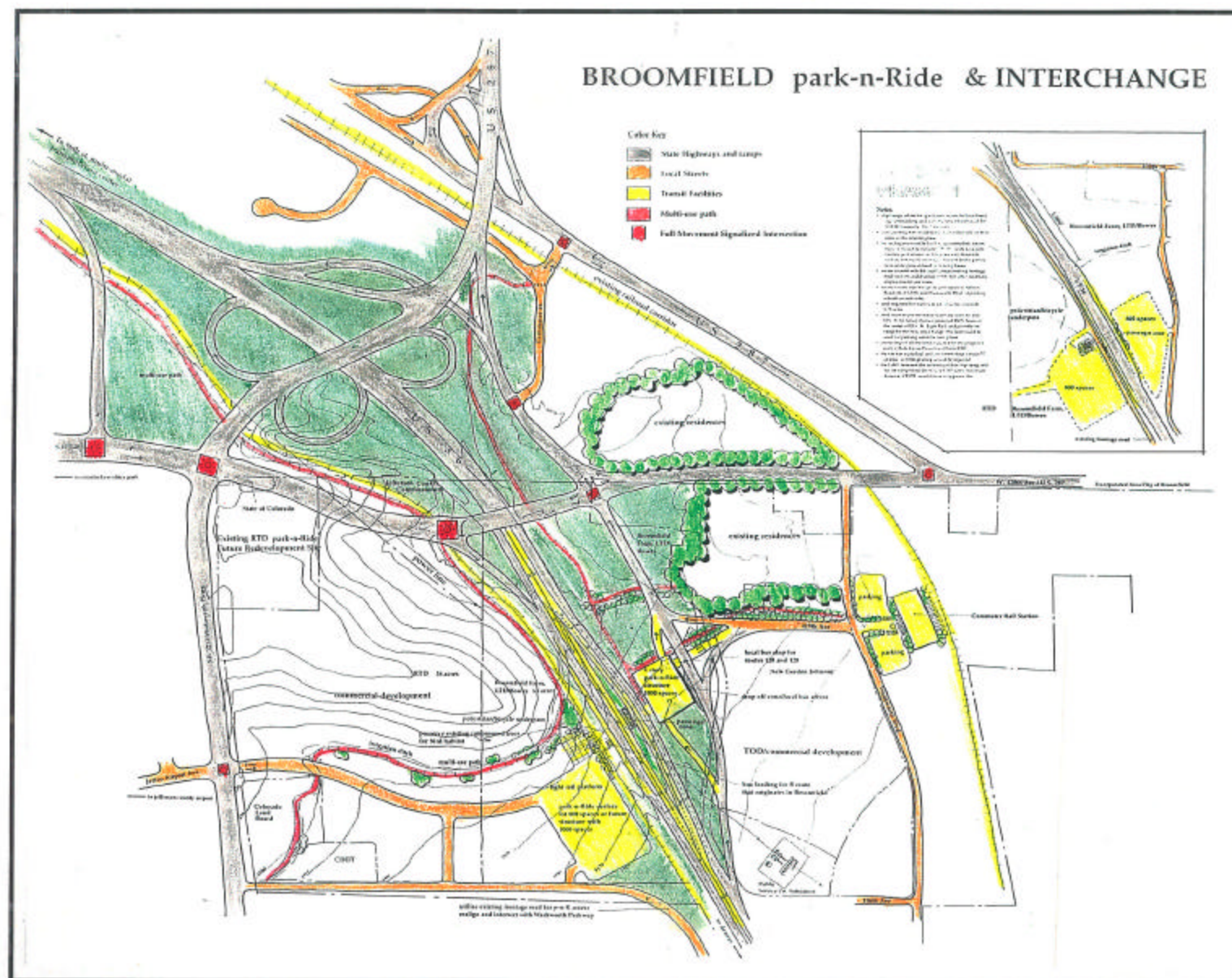
HOV SYSTEM OPERATION IS PLANNED FOR TWO PHASES: AN INITIAL PHASE BEFORE DEDICATED LANES ARE BUILT AND A SUBSEQUENT PHASE WITH SERVICE FROM A FULL BARRIER-PROTECTED SET OF LANES IN THE MEDIAN OF U.S. 36.

INTERCONNECTING TRANSIT SERVICES TO THE NEW MULTIMODAL PARK-N-RIDE WILL BE PROVIDED BY A BIDIRECTIONAL BROOMFIELD LOOP THAT WILL ALSO LINK TO INTERLOCKEN, THE RETAIL DESTINATIONS AT THE 96TH STREET INTERCHANGE, AND THE CORE AREAS OF THE CITY OF BROOMFIELD.

2A: 96th St Interchange with "Zip" Shuttle



2B: Proposed Broomfield Interchange with relocated RTD park 'n Ride



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City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**PROPOSED
TRANSIT AT
96TH ST. &
BROOMFIELD
INTERCHANGES**



FEET

NOT TO SCALE

DATE: 4/22/97

5. GATEWAY DISTRICT PLAIN & "SUB" DISTRICTS

OVERALL GATEWAY DISTRICT

WITHIN THE OVERALL SUB-AREA PLAN STUDY PROCESS, A "GATEWAY DISTRICT BOUNDARIES PLAN" WAS ESTABLISHED TO IDENTIFY THE SPECIFIC PROPERTIES WITHIN THE OVERALL CORRIDOR AREA THAT CRITICALLY AFFECT THE FUTURE OF THE AREA, AND TO BEGIN TO "GROUP" PROPERTIES WITH SIMILAR NEEDS/CHARACTERISTICS INTO SPECIFIC "SUBDISTRICTS."

DUE TO THE VARIOUS LEVELS OF PREVIOUS PLANNING, EXISTING DEVELOPMENT

PRESSURE AND OWNERSHIP INVOLVEMENT IN THE PUBLIC PLANNING PROCESS TO DATE, TWO PHASES WITHIN THE 'GATEWAY DISTRICT HAVE BEEN ESTABLISHED.

THE TWO PHASES AND VARIOUS SUBDISTRICTS WITHIN EACH PHASE WILL AFFECT THE REQUIREMENTS AND SPECIFIC NEEDS RELATIVE TO THE DESIGN STANDARDS APPROPRIATE FOR EACH AREA, AS WELL AS THE PARTICULAR VISION AND GOALS FOR EACH SUBDISTRICT. (SEE ALSO DESIGN STANDARDS SECTION)

PHASE 1 SUBDISTRICT PARCELS

THE BROOMFIELD/U.S. 36 GATEWAY DISTRICT HAS BEEN DEFINED IN TWO PHASES. IN GENERAL, THE PHASE ONE GATEWAY DISTRICT INCLUDES A FEW MINOR ADDITIONS TO THE PREVIOUSLY ADOPTED "ORDINANCE #907 - U.S. 36/96TH INTERCHANGE INFLUENCE AREA." IT FOCUSES ON THE SOUTH SIDE OF THE U.S. 36 CORRIDOR BETWEEN U.S. 287 AND 96TH, THE 96TH STREET/NORTHWEST PARKWAY CORRIDOR IN THE NORTH AND SOUTH VICINITY OF U.S. 36 TO JEFFCO AIRPORT, THE STATE HIGHWAY 128 CORRIDOR FROM WADSWORTH PARKWAY TO 96TH STREET, AND THE LAND USES ADJACENT TO THOSE CORRIDORS.

THE PHASE ONE PORTION OF THE GATEWAY DISTRICT HAS BEEN DIVIDED INTO SIX (6) SUBDISTRICTS TO ALLOW SPECIFIC GOALS

AND POLICY/STANDARDS FOR EACH SUBDISTRICT. THE PHASE ONE GATEWAY SUBDISTRICTS ARE AS FOLLOWS:

1. FREEWAY AND ARTERIAL ROADWAY SUBDISTRICT
2. U.S. 36 / 96TH STREET MIXED-USE SUBDISTRICT
3. JEFFCO AIRPORT NORTH EMPLOYMENT/AVIATION SUBDISTRICT
4. INTERLOCKEN SUBDISTRICT
5. NORTH 96TH STREET / NORTHWEST PARKWAY SUBDISTRICT
6. OPEN SPACE SUBDISTRICT

FUTURE PHASE 2 SUBDISTRICTS

THE FUTURE PHASE TWO PORTION OF THE GATEWAY DISTRICT HAS BEEN DEFINED AND DIVIDED INTO FIVE (5) FUTURE SUBDISTRICTS INCLUDING:

7. PHASE TWO FREEWAY AND ARTERIAL SUBDISTRICTS
8. INDUSTRIAL LANE / MIDWAY BLVD. LIGHT INDUSTRIAL SUBDISTRICT
9. U.S. 36 / WADSWORTH MIXED-USE SUBDISTRICT
10. U.S. 287 COMMERCIAL SUBDISTRICT
11. SOUTHWEST JEFFCO AIRPORT EMPLOYMENT SUBDISTRICT

NOTE: THE FUTURE PHASE TWO PORTIONS OF THE GATEWAY DISTRICT WILL BE THE SUBJECT OF FUTURE STUDIES TO DEFINE THE SPECIFIC GOALS AND POLICIES FOR THOSE AREAS.

BECAUSE OF THE CRITICAL IMPACT TO THE GATEWAY DISTRICT AND COMPLEXITIES INVOLVED IN THE CURRENT PLANNING PROCESS, THE "U.S. 36/96TH STREET MIXED-USE SUBDISTRICT" HAS RECIEVED SPECIAL FOCUS AND IS FEATURED IN THE NEXT SECTION.



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City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**GATEWAY
DISTRICT
BOUNDARIES**



FEET
0 400 800 1600 3200

DATE: 4/22/97

GATEWAY DISTRICT BOUNDARIES (SUBDISTRICTS)

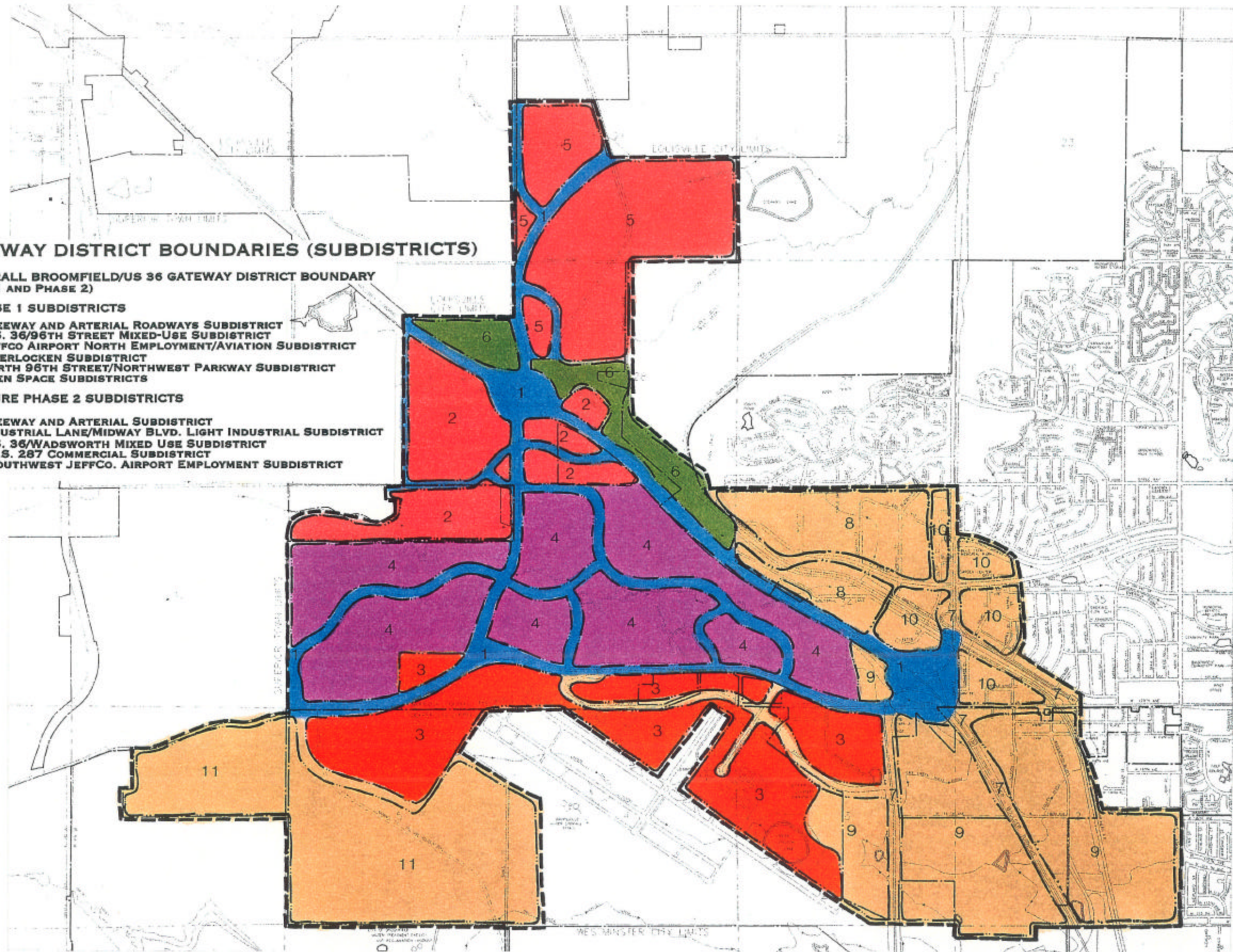
**A. OVERALL BROOMFIELD/US 36 GATEWAY DISTRICT BOUNDARY
(PHASE 1 AND PHASE 2)**

B. PHASE 1 SUBDISTRICTS

- 1. FREEWAY AND ARTERIAL ROADWAYS SUBDISTRICT
- 2. U.S. 36/96TH STREET MIXED-USE SUBDISTRICT
- 3. JEFFCO AIRPORT NORTH EMPLOYMENT/AVIATION SUBDISTRICT
- 4. INTERLOCKEN SUBDISTRICT
- 5. NORTH 96TH STREET/NORTHWEST PARKWAY SUBDISTRICT
- 6. OPEN SPACE SUBDISTRICTS

C. FUTURE PHASE 2 SUBDISTRICTS

- 7. FREEWAY AND ARTERIAL SUBDISTRICT
- 8. INDUSTRIAL LANE/MIDWAY BLVD. LIGHT INDUSTRIAL SUBDISTRICT
- 9. U.S. 36/WADSWORTH MIXED USE SUBDISTRICT
- 10. U.S. 287 COMMERCIAL SUBDISTRICT
- 11. SOUTHWEST JEFFCO. AIRPORT EMPLOYMENT SUBDISTRICT



THE U.S. 36/96TH STREET MIXED-USE SUBDISTRICT

AS ONE OF THE MOST DYNAMIC AREAS IN THIS SECTION OF THE COUNTY, THE LAND AREAS ADJACENT TO THE NEW U.S. 36/96TH STREET INTERCHANGE ARE CURRENTLY UNDERGOING SIGNIFICANT DEVELOPMENT PRESSURE. THIS ACTIVITY REPRESENTS PRIME OPPORTUNITIES FOR THE CITY TO SHAPE ITS FUTURE.

WITH THE SUN MICROSYSTEMS CAMPUS UNDERWAY, ROCK CREEK CONTINUING TO DEVELOP, INTERLOCKEN REALIZING SIGNIFICANT ONGOING SALES, AND THE FUTURE NORTHWEST PARKWAY CORRIDOR EXPERIENCING STRONG MOMENTUM, THE TIME TO FULLY PLAN THIS KEY STRATEGIC LOCATION IS RIPE.

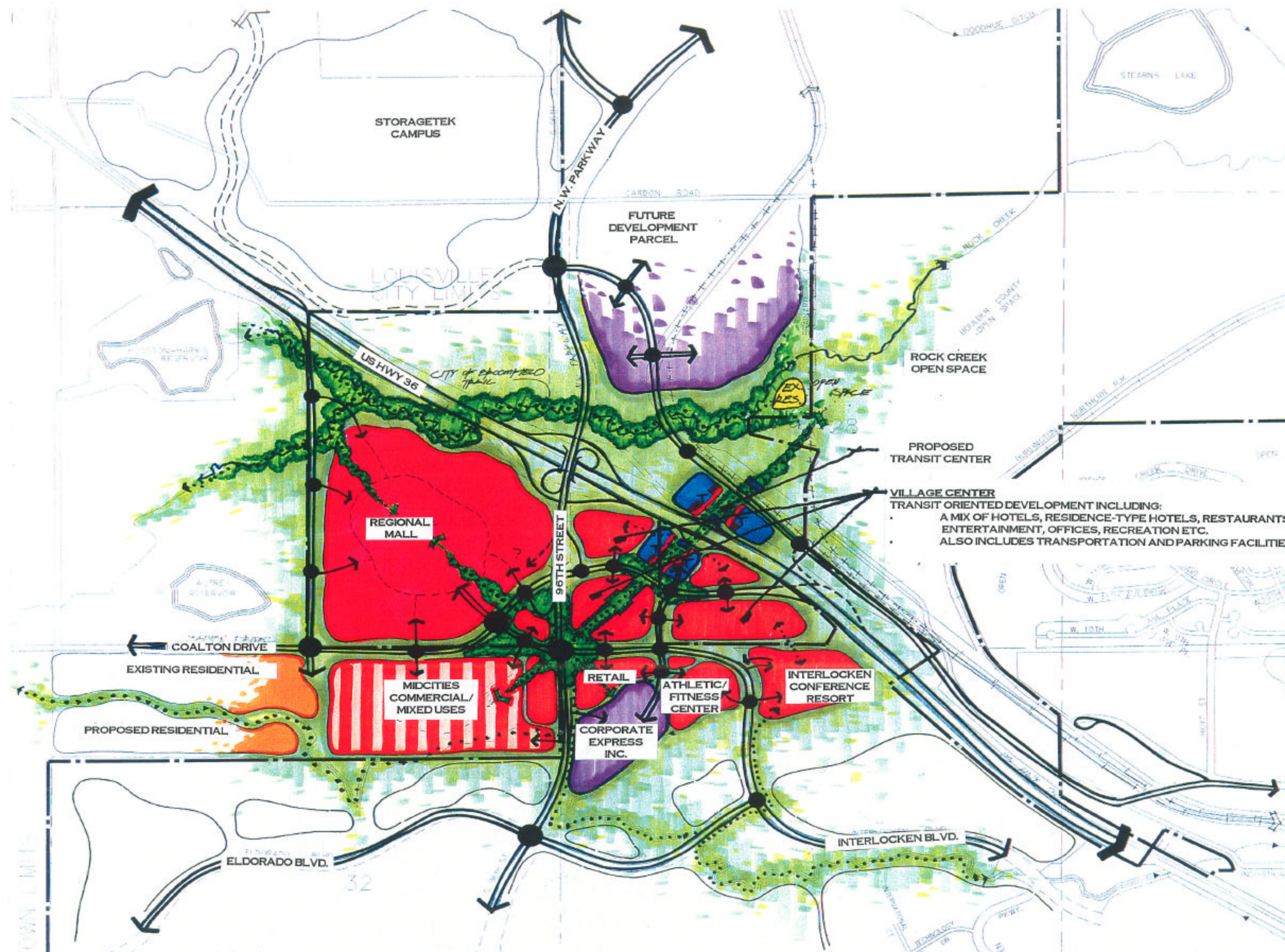
HIGH QUALITY RETAIL, COMMERCIAL AND MIXED-USE DEVELOPERS ARE CURRENTLY DESIGNING MAJOR PORTIONS OF THE SUBDISTRICT. IT IS ESSENTIAL THAT THESE DEVELOPERS COORDINATE THE INFRASTRUCTURE NETWORK SYSTEMS, PEDESTRIAN AND CIRCULATION SYSTEMS, OPEN SPACE CORRIDORS, DRAINAGE PATTERNS, AND COMPATIBLE LAND USES.

THROUGH AN INTERACTIVE PROCESS BETWEEN VARIOUS CITY DEPARTMENTS, SUBDISTRICT LAND OWNERS, AND KEY U.S. 36 CORRIDOR CONSULTANTS, A UNIFIED "VISION PLAN" FOR THE U.S. 36/96TH MIXED-USE SUBDISTRICT IS EMERGING. IT EMBODIES THE FOLLOWING KEY CONCEPTS:

- INTEGRATE THE TRANSIT CENTER "HUB" INTO A MIXED-USE TRANSIT ORIENTED

- DEVELOPMENT AS THE CENTRAL CORE OF A NEW PEDESTRIAN FRIENDLY VILLAGE CENTER. THE PLAN ENVISIONS A STATE-OF-THE-ART TRANSIT CENTER WITH MODERN "SHUTTLE" SYSTEMS.
- REALIGN COALTON ROAD TO THE NORTH, SUPPORTED BY FUTURE DIRECTIONAL
- INTERCHANGES AT THE EAST END TOWARD DENVER AND AT A PROPOSED 92ND STREET ALIGNMENT TOWARD BOULDER. COALTON REALIGNMENT WITH A GRADE SEPARATED UNDERPASS AT 96TH ALONG WITH A SUPPORTIVE ROAD NETWORK WILL ALLOW MAXIMUM VEHICULAR EFFICIENCY WITH EXCELLENT VISIBILITY AND ACCESS TO THE PROPOSED PROJECTS.
- INTERCONNECT, THROUGH PEDESTRIAN "SPINES" AND SHUTTLE SYSTEMS, THE FUTURE REGIONAL MALL SITE WITH THE MIDCLTIES COMMERCIAL PROPERTY, THE MIDLAND/STANGER MIXED-USE, INTERLOCKEN'S RESORT HOTEL & CONFERENCE CENTER, ATHLETIC FITNESS CENTER, AND RETAIL ESTABLISHMENTS.

WHILE THE AREA IS EMERGING THROUGH DETAILED PLANNING AND DESIGN PHASES, THE U.S. 36/96TH MIXED-USE SUBDISTRICT "CONCEPT PLAN" HAS BEEN REVIEWED BY EACH ADJACENT DEVELOPER AS THE OVERALL VISION TO SHAPE THIS KEY AREA.



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City of Broomfield

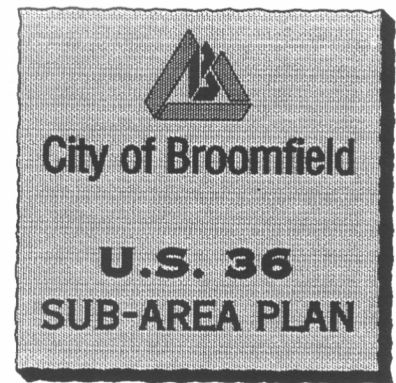
**U.S. 36
SUB-AREA PLAN**

**US 36/96TH
STREET MIXED-
USE SUBDISTRICT
(PREFERRED
ALTERNATIVE)**



FEET
0 200 400 800 1600

DATE: 4/22/97



MAY. 1997

6. GATEWAY DISTRICT DESIGN STANDARDS

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I. INTRODUCTION

Through a recent comprehensive Master Planning process for the entire City, as well as the more detailed focus study of the **U.S. 36 Sub-Area Plan**, the U.S. 36 Corridor has been identified as a critical resource to the Broomfield community and surrounding cities. The area is strategically located and will continue to represent significant opportunity for quality development as a key south "window" through and into the City of Broomfield. This distinction has identified the U.S. 36 Corridor as a "Gateway" area or District.

To ensure properly planned and integrated development of the Gateway District, **Design Standards** have been established as a key part of an overall Sub-Area Plan.

1.A PURPOSE AND APPLICABILITY

The purpose of the Broomfield **U.S. 36 Sub-Area "Gateway" Design Standards** is to assist private developers, as well as public agencies and service providers, in the proper and orderly development of the area and to recommend minimum standards and guidelines for quality that will help each property and the area as a whole, maintain its value as adjacent projects develop. The Design Standards are intended to protect the communities' quality of life, minimize adverse impact from development, protect economic vitality, encourage high quality development, discourage less attractive/enduring alternatives and enhance security/safety for all users.

The Design Standards are intended to guide and apply to all properties, private developments and public improvements throughout the "Gateway District" area. The level of applicability of specific design standards to any particular development proposal will need to be assessed by the City of Broomfield during planning, zoning and processing phases.

1.B DESIRABLE AND UNDESIRABLE ELEMENTS

In general, developments and improvements should incorporate the following desirable elements:

1. Provide well articulated clear and efficient access and roadways to and through the area, without diminishing the level of traffic service to adjacent properties;
2. Provide all reasonable facilities to promote "alternative" modes of transportation to supplement personal automobile transportation, including pedestrian systems, bikeways, and transit facilities;
3. Provide land uses and development improvements that promote quality in the area and do not detract from the property values, image, or developability of adjacent properties. Quality Site Planning, infrastructure, landscaping, signage, architectural massing, details and meaningful open space areas are all desired for the area. Compatibility with other uses, themes, and designs for the area is very important.

In general, developments and improvements should avoid or minimize the following undesirable elements:

1. Poorly designed access and roadways which diminish the capacities, safety, or usefulness of the "traffic system" and which promote congestion or other negative impacts to the users of the area.
2. Inadequate facilities which deter or discourage users from considering alternative modes of transportation due to lack of facilities, poorly designed elements, safety issues, or other deterrents.
3. Development improvements which reflect a substandard image, lack of care in design or

detract from the value or developability of adjacent projects. Facilities which create disjointed and confusing site areas, circulation patterns, or design treatments are discouraged. Facilities that do not screen negative views to large parking areas, service docks and other undesirable features should be avoided.

1.C RELATION OF GATEWAY DESIGN STANDARDS TO OTHER REGULATIONS/STANDARDS

The Design Standards are intended to supplement the City of Broomfield Codes, Ordinances, and Development Standards. The

Design Standards are intended to be used by developers and referral agencies and city departments during development review, processing, and implementation phases as guidelines to the "intent" of the Sub-Area vision plan.

While these Design Standards are "advisory" in nature, many will be extracted from the Sub-Area Plan and become part of the City Code, if approved and adopted by the City. If portions of the Design Standards become part of the City Code, the remaining Standards will remain as an advisory guide to be used during the review process.

2. GATEWAY DISTRICT BOUNDARIES (SUBDISTRICTS)

Per the U.S. 36 Sub-Area Planning Process key goals and objectives have been established for the corridor. While the area as a whole is seen as a major resource to the Broomfield Community and high quality Development Standards are anticipated/intended for the whole area (Gateway District), special features and requirements specific to various portions or "Sub Districts" are necessary to achieve the overall goals for the community.

2.A OVERALL GATEWAY DISTRICT BOUNDARY

In the U.S. 36 Sub-Area Plan, a "U.S. 36 Gateway District Boundary" was established that encompasses the key areas within the City, which impact or influence the future of the corridor. Within the Gateway District Area, two (2) phases have been identified, relating to the level of current planning studies, anticipated development schedules, and public/owner involvement in the planning process to date.

It is the intent of the Design Standards to guide and influence both phase one and phase two of the Gateway District. It is also the intent of the Design Standards to allow proper planning and design flexibility within the general quality level intended. Each Subdistrict in both phase one and phase two will develop as needed for each area to be successful. For example: the needs of the regional mall facility will be very different from the needs of the North JeffCo Airport Development area and, therefore, flexibility in specific land uses, Design Standards, and Development Review approaches should be tailored for each project. Each Subdistrict has unique goals and requirements to collectively support the overall Gateway District.

2.B PHASE 1 SUBDISTRICTS

The Broomfield/U.S. 36 Gateway District has been defined in two phases. In general, the Phase One Gateway District includes a few minor additions to the previously adopted "Ordinance #907 - U.S. 36/96th Interchange Influence Area."

It focuses on the South side of the U.S. 36 Corridor between U.S. 287 and 96th, the 96th Street/Northwest Parkway Corridor in the north and south vicinity of U.S. 36 to Jeffco Airport, the State Highway 128 Corridor from Wadsworth Parkway to 96th Street, and the land uses adjacent to those corridors.

The Phase One portion of the Gateway District has been divided into six (6) subdistricts to allow specific goals and policy/standards for each subdistrict. The Phase One Gateway Subdistricts are as follows:

1. Freeway and Arterial Roadway Subdistrict
2. U.S. 36 / 96th Street Mixed-Use Subdistrict
3. Jeffco Airport North Employment/Aviation Subdistrict
4. Interlocken Subdistrict
5. 96th Street / Northwest Parkway Subdistrict
6. Open Space Subdistrict(s)

Note: The future Phase Two portions of the Gateway District will be the subject of future studies to define the specific goals and policies for those areas.

The Phase One Subdistrict Design Standards are as follows:

2.1 FREEWAY & ARTERIAL. ROADWAY SUBDISTRICTS

Description/Location:

The Freeway and Arterial Roadway Subdistrict consists of the existing and proposed public right-of-way and associated open space areas within the corridors as shown on the Gateway Subdistrict maps.

Goal:

An efficient high quality freeway and arterial roadway system serving and running through the Gateway District is critical to the ongoing economic stability, safety, image, and success of the Gateway District and surrounding communities.

One of the largest impacts on the public's perception of the City of Broomfield is its quality of life and image perceived from the Gateway Districts Freeway/Arterial network. In addition to the safe and efficient movement of vehicles throughout the District, state-of-the-art multi-modal transit systems, quality landscaping, visual buffering, view enhancements, signage controls, safe pedestrian/bike interface and ongoing maintenance will all need to be addressed in design and implementation throughout development within this subdistrict. All developments impacting or adjacent to the freeway and arterial roadway system will be required to coordinate infrastructure improvements and participate in the ongoing success of this subdistrict.

Policy/Standard:

All freeway and arterial roadway improvements will be required to comply with the overall **Transportation and Access Plan** for the Gateway District (see "Sub-Area Transportation Plan"). Access will be limited to those locations shown on the Plan to maintain an efficient roadway system, unless additional traffic studies can demonstrate that "better" alternatives will not lower the "level of service" from that which is established in the overall Plan, nor have a negative aesthetic impact.

In General, it is the intent of these Policy/Standards that the prorated cost of roadway improvements will be appropriately and proportionately paid for by the developments creating the demand for the improvements. The City, however, may choose to facilitate and expedite improvements through a variety of funding approaches as deemed in the best interest of the community. Land dedications, cost-sharing and reimbursements of improvement costs advanced by others shall all be pursued and considered within the Gateway District.

All frontages will be required to be landscaped and maintained along all freeways and arterial roadways within the subdistrict beginning at the time of development (including the public right-of-way areas). All landscape improvements shall meet the landscape standards (see Section 8)

and the design of all subdistrict corridors shall demonstrate compatibility within the overall theme and quality level of landscaping within the Gateway District. The accommodation of and interface with Gateway District Transit Systems will be required. Pedestrian/bicycle trail systems shall be provided and interconnect to the overall regional system, drainage crossings, and grade separated intersections should be accentuated as features, and upgraded treatments will be required. Roadways should not be barriers to pedestrians.

All building and parking setbacks will be required to be landscaped, maintained, and designed to tie to the overall corridor landscape themes. All positive views to natural features should be enhanced/encouraged. All views to parking lots, service areas, utility equipment, and unarticulated building facades will require visual buffering.

2.2 U.S. 36 / 96TH STREET MIXED-USE SUBDISTRICT

Description/Location:

The U.S. 36/96th Street mixed-use subdistrict is the approximately 300 acres immediately to the south the new 96th/U.S. 36 Interchange with a small portion on the north side of U.S. 36.

Goal:

A quality regional mixed-use commercial subdistrict is to be located at the crossroads of two major regional freeways to maximize economic viability, while minimizing traffic impacts and congestion within the Community. As a highly visible portion of the Gateway District, quality landscaping, site design, signage, and architectural treatments are envisioned and required for the area. In addition to safe and efficient vehicular access to the subdistrict, all forms of "multi-modal" transit system access are planned for the area, to reduce auto dependency and congestion, attract all segments of the population, and establish one of the premier "transit-oriented" developments in this region of the country.

Policy/Standard:

All developments and improvements within the subdistrict should accommodate, comply, and participate in the overall development of the freeway and arterial roadway system as designed in the sub-area plans, as well as local circulation routes. A consistent landscape and signage theme compatible with the district standards and adjacent developments should be established for the subdistrict and fully integrated between the various projects within the subdistrict.

A high quality regional mall facility on the southwest corner of the 96th Street Interchange should feature the natural amenity of the Rock Creek Corridor and Regional Trail System, proximity to a regional transit "hub," and maximize all opportunities to interconnect the mall with adjacent residential and employment communities. All approaches to mitigate the dominant impacts of the automobile and feature pedestrian, bike, transit and open space components should be pursued. Requirements associated with the large scale development of the Mall should be taken into account by both the developers and the City during the planning, design, processing, and implementation phases.

A series of transit-oriented mixed-uses are envisioned surrounding the mall, and the Transportation Center, including retail, entertainment, residence-type hotels, multi-family residences, professional offices, with special focus on pedestrian plazas, open space features, and transit connections.

**2.3 JEFFCO AIRPORT NORTH
EMPLOYMENT / AVIATION
SUBDISTRICT**

Description/Location:

This subdistrict occurs on the north edge of Jeffco Airport along State Highway 128.

Goal:

The development parcels of this subdistrict occur along the highly visible bluff, a key backdrop view from the U.S. 36 Gateway Corridor and along the

Highway 128 frontage. A high quality employment/aviation land use is anticipated incorporating offices, aviation schooling, airport servicing, retail facilities, corporate campuses, and related commercial support uses. All future developments will need to provide quality landscape, signage, site planning, and architectural features per the Gateway Standards.

As Jeffco Airport continues to provide convenient, safe and efficient air travel services, this subdistrict must be recognized as a "Gateway" to the area for key business and recreational travelers and development in the area should establish a strong first impression character through quality development.

Policy/Standard:

Access along State Highway 128 should be well analyzed through traffic studies and planned to facilitate proper principal arterial level service along the corridor, and all access points should be embellished as key entrances with quality landscaping and signage improvements.

All improvements along the bluff should be well site planned to minimize visual impact of negative features, such as parking, service docks, utility areas, and unarticulated building facades. Special mitigation efforts to accommodate steep north facing grades in an attractive manner shall be required, and all fill conditions should be minimized and treated with intensified landscape revegetation. Site improvements and buildings should carefully terrace into the hillside and utilize quality, retaining walls, and artificial abrupt grade slopes are not allowed. Access to the subdistrict individual parcels should primarily come from 120th Avenue, and all developments in the subdistrict should participate in the upgrading of the 120th Avenue Corridor. Pedestrian and transit connections to the Airport and regional systems will be required. A new landscaped entrance to Jeffco Airport aligning with future Interlocken Boulevard should be pursued.

2.4. INTERLOCKEN SUBDISTRICT

Description/Location:

Interlocken is a 1,000 acre campus for Advanced Technology Companies on the south side of U.S. 36 between Broomfield's western city limits and the U.S. 287 Interchange.

Goal:

The Interlocken Development has set the standard in the Gateway District for high-quality development and the incorporation of enhanced roadways, landscaping, signage controls, site planning, and architectural quality control features. The integral network of pedestrian paths, open space amenities, and transit facilities planned or existing, should continue to be a focus and establish an example for all Gateway District Developments. Focus on environmental sustainable design principles, resource conservation, and "quality of life" for all users should continue as a priority. State-of-the-art infrastructure systems have been established to support the advanced technology companies' key to the area and all extensions and interface with those systems should continue throughout Interlocken, the Gateway District, and adjacent developments.

Policy/Standard:

The Interlocken Campus should continue to develop per the approved P.U.D. Zoning Documents, and established design guidelines, and quality control process currently enforced. The Interlocken Architectural Control Committee should continue to evaluate all proposed developments for compatibility with the General Development Plans and confirm the proper connections between each individual development and the overall regional series of infrastructure systems. Compatibility with the Broomfield/U.S. 36 subarea plans and these Gateway Standards should be an ongoing part of the review process.

Continuity between the Interlocken landscape features along the U.S. 36 and Highway 128 frontages should be extended throughout the

subdistrict and carry into adjacent subdistricts as a unified theme.

2.5 96TH STREET / NORTHWEST PARKWAY SUBDISTRICT

Description/Location:

The area of this subdistrict occurs north of Rock Creek Drainageway, east of 96th Street, west of the Boulder County Rock Creek Farm Open Space, and within the recently annexed portion of Broomfield.

Goal:

The 96th Street/Northwest Parkway Subdistrict represents an opportunity to provide a fully master-planned area for quality mixed-use development, facilitating the future northwest parkway corridor and enhancing or preserving the key natural features in the vicinity.

As a "Gateway Development" to the City of Broomfield, as well as to Louisville and Lafayette, the subdistrict is envisioned to include quality mixed-use commercial land uses including retail, professional offices, corporate campuses, research and development facilities, and transit oriented developments. In addition, a variety of housing types are anticipated which "step down" in density toward the Rock Creek Farm Open Space Corridor.

Policy/Standard:

The future alignment of the Northwest Parkway right-of-way corridor should be fully accommodated and planned into each development. Limited access to the area from the Northwest Parkway should be established as a major "Gateway Entrance" with high quality landscaping, signage, and entry features. The subdistrict should establish an overall consistent theme for landscaping, signage, and open space amenities to enhance the subdistrict as a whole.

The Rock Creek Corridor and Regional Trail System should be a special southern edge to the subdistrict and all opportunities to "pull" the open space features and trail connections into the area

with development should be pursued. The proximity to the regional transit "hub" at 96th Street/U.S. 36 will require this area to fully accommodate all modes of transit systems into the development and encourage use of these systems.

The realigned 96th Street connection should accommodate and provide a quality entrance into the City of Louisville. The Midway Blvd. realignment and extension to the area should be incorporated and all developments in the subdistrict should support in the improvement of the Midway Corridor.

All avenues to mitigate the railroad impacts on development through landscaping, etc., should be pursued and minimize the "barrier effect" of the development's connection to the Rock Creek Farm Open Space by grading above the tracks and allowing grade-separated crossing for bikes/pedestrians. The relocation of the railroad tracks to the east should be considered, if feasible without diminishing future community rail possibilities.

2.6 OPEN SPACE SUBDISTRICT(S)

Description/Location:

The Open Spaces Subdistrict(s) occurs primarily along the north side of U.S. 36 from StorageTek to Industrial Lane.

Goal:

The Rock Creek Farm Open Space Corridor is one of the most important natural features in Broomfield, Boulder County and within the Gateway District. The key goal of this Subdistrict is to preserve and enhance the Open Space natural amenity by allowing the Open Space system to remain continuous south to U.S. 36 Frontage, and limit development that would inhibit views and pedestrian connections to the area.

Development along portions of the north side of U.S. 36 between 96th Street and Industrial Lane would diminish views to the Open Space area and place the amenity in a "backyard" perception by everyone traveling along U.S. 36.

The area is envisioned to make a strong open space and pedestrian/bike connection between the new transit-oriented development south of U.S. 36 at 96th Street, StorageTek, Interlocken, Rock Creek Community, Industrial Lane/Midway Employment Centers, and all points along the western edge of Broomfield.

Policy/Standard:

An open space "Linear Park" connection should be created with a key regional/pedestrian bike path along the north side of U.S. 36 from the future transit station at 96th to the existing regional trail underpass at Industrial Lane. The "Linear Park" should include an 8' trail, enhanced landscaping, grading, and berming to enhance views and diminish railroad impacts, and accommodate the Midway realignment connection to the Northwest Parkway. The "Linear Park" trail system will also connect to Rock Creek Farm Open Space and the transit center underpass at U.S. 36. All improvement projects and developments in the area of this subdistrict should assist and anticipate the execution of the Linear Park Trail System. The opportunity for incorporation and interface of the StorageTek open space area into the overall open space subdistrict should be preserved. All needed "grade-separated" trail connections at the new mall entrance should be incorporated into infrastructure improvement projects. Open space region/trail connections along the south side of U.S. 36 from 96th to 88th Street should be facilitated. Shared parking opportunities with the transit center and adjacent developments should be considered, as well as strong multi-modal connections to the regional systems.

2.C. FUTURE PHASE 2 SUBDISTRICTS

The future Phase Two portion of the Gateway District has been defined and divided into five (5) future subdistricts including:

- 7. Phase Two Freeway and Arterial Subdistrict
- 8. Industrial Lane / Midway Blvd. Light Industrial Subdistrict
- 9. U.S. 36 / Wadsworth Mixed-Use Subdistrict

10. U.S. 287 Commercial Subdistrict

11. Southwest JeffCo Airport Employment Subdistrict

Note: The future Phase Two portions of the Gateway District will be the subject of future studies to define the specific goals and policies for those areas.

3. SITE PLANNING DESIGN STANDARDS

GOAL:

All development improvements should be sited so they enhance visibility from major roadways and entries, create visual interest and provide convenient circulation for both vehicles and pedestrians. Placement of structures should consider the existing built context, all adjacent land uses, and the location of major traffic arterials and should include an analysis of the site's physical and natural characteristics and particular influences. High quality organized developments with common gathering spaces shall be created through the clustering of buildings and other creative design solutions.

3.1 BUILDING SITING AND ORIENTATION

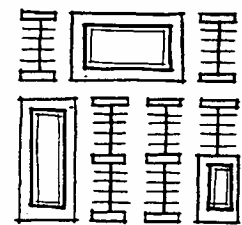
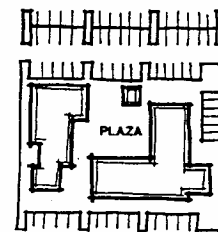
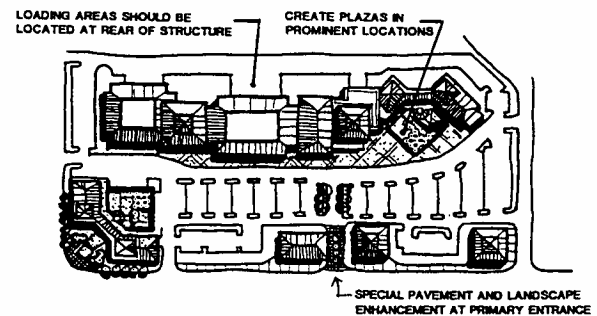
Policy/Standard:

Buildings should be sited so that the character of existing land forms and site features is respected; the relationships between buildings are strong; pedestrian and vehicular circulation is facilitated; and the overall quality as viewed from adjacent properties is maintained. Cluster buildings to create plazas and pedestrian gathering places and establish visual links between separate structures. Design for high quality views through and into each development. Develop sites in a comprehensive and coordinated manner to provide order and compatibility, and to avoid jumbled or confusing development. Siting of facilities should respond to solar, wind, and other microclimate factors.

3.2 BUILDING AND PARKING SETBACKS

Policy/Standard:

All development should provide a well-landscaped and pedestrian friendly character along major and minor streets. All buildings and parking should be set back from perimeter and interior streets a sufficient distance to create a distinct landscape



CLUSTER BUILDINGS TO CREATE PLAZAS AND PEDESTRIAN GATHERING PLACES.

zone between buildings, parking, and adjacent roadways, and to allow adequate visual buffering and screening. Varying building setbacks above minimum standards to enhance visual interest along the streetscape is strongly encouraged.

In general, wrapping the project perimeter with parking lots, is discouraged, except in cases of comprehensively planned, very large buildings; while opportunities to orient some buildings closer to the street to screen parking and provide strong pedestrian connections to buildings is encouraged. Minimum setbacks are as follows:

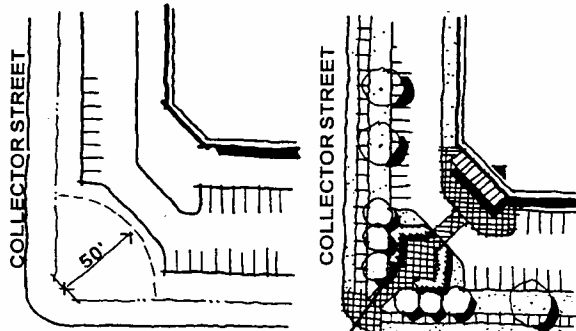
A. Minimum Building and Parking Setbacks

(from all perimeter property lines or rights-of-way):

- Freeway/Principal Arterial R.O.W. 75ft.*
- Minor Arterial/Major Collector R.O.W. 30ft.
- Collector/Local Road R.O.W. 20ft.
- Perimeter Property Lines 30ft.
- Internal Property Lines 20ft.

(Note: Within a development, a Village Center Concept of common walls, zero lot lines, and minimal setbacks to public spaces is encouraged if designed in a comprehensive manner. The City should allow zero or minimal setbacks in those cases).

* Setbacks from freeway/principal arterial R.O.W. lines can vary to 30' min. if additional landscape buffering/screening or other mitigation or trade-off techniques are provided and approved by the City. Varying the setbacks to undulate the landscape zones is encouraged.



TREATMENT OF STREET CORNERS WITH PARKING

3.3 VIEW CORRIDORS AND PUBLIC AMENITIES

Policy/Standard:

Views from and into the Gateway District's attractive natural surroundings, such as the Flatirons and Rocky Mountain backdrop, as well as distinctive on-site features, including water features, golf course, park areas, and open space, are amenities to be shared by all. Maximizing view opportunities of these features from roadways, open space corridors, building entries, and all user spaces is required.

Developers are to emphasize these key natural features by reflecting them in their individual developments.

Plazas, courtyards and other public pedestrian amenities should be incorporated into both overall district plans and individual site development plans. These areas should be designed to be easily accessible and reasonably comfortable for a substantial part of the year.

3.4 SITE COVERAGE REQUIREMENTS

Policy/Standard:

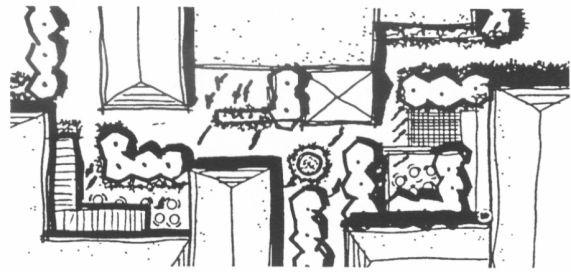
Open space and proper landscape buffers are highly valued and required within the Gateway District and therefore building, parking, and driveway site coverages within each development are to be limited as follows:

- A. **The maximum building, parking, and driveway coverage within each parcel and for the entire development is 75%.**
- B. **The minimum amount of open space provided within a development parcel or cluster of parcels is 25%.** Open space can include "pedestrian-oriented" areas such as sidewalks and hardscape plazas within open space areas and pedestrian gathering places. This open space area is in addition to any "required public land dedication". (Note: for large scale buildings over 350,000 s.f. GLA with large public "indoor spaces" may also be allowed as part of the open space requirement if approved by the City).

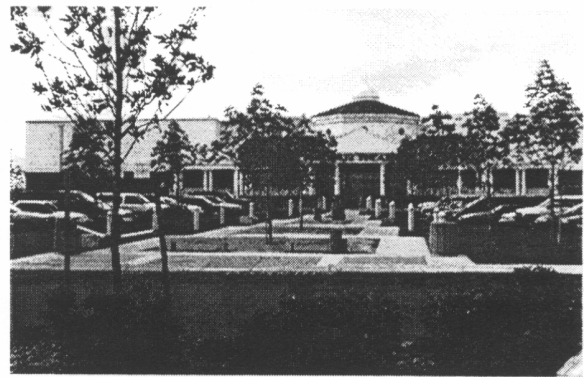
3.5 UTILITIES, MECHANICAL, SERVICE AND STORAGE AREAS

Policy/Standard:

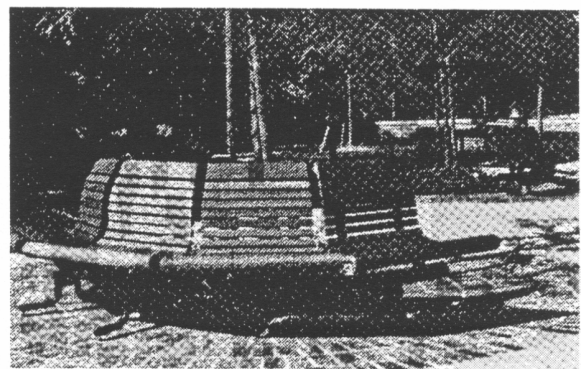
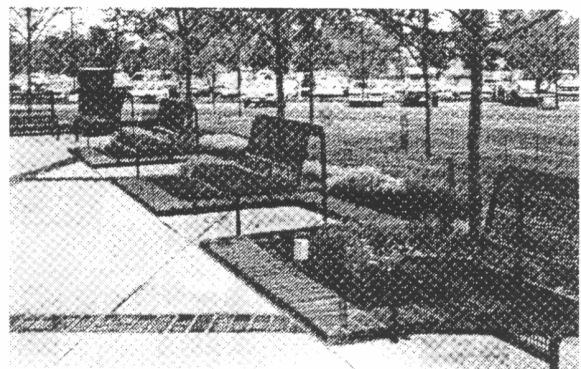
The visual and auditory impacts of utilities, mechanical equipment, data transmission dishes, towers, microwaves, and other services and equipment should be minimized within all developments. Install all permanent utility lines underground. Screen all transformers, utility equipment and other utility cabinets from view from streets and adjacent property.



TREAT SPACES BETWEEN BUILDINGS AS "OUTDOOR ROOMS".



DELINEATE AND ENHANCE AREAS OF INTENSE PEDESTRIAN ACTIVITY.



PROVIDE SEATING THAT IS USABLE YEAR ROUND.

Service, delivery and storage areas are visually obtrusive. The visual impact of service and delivery areas should be minimized, especially views of such areas from public ways and along designated view corridors and adjacent properties. Careful design of screening solutions and placement of these facilities must be planned.

3.6 WATER QUALITY CONTROL AND DRAINAGE

Policy/Standard

To as great an extent as possible, stormwater management and site drainage should be designed as visual and recreational amenities, as well as site development necessities. First and foremost, however, downstream impacts shall be

minimized. Utilize consolidated detention ponds, grassy swales, naturalistic stream bed details and attractive year-round features wherever possible. Maintain natural "continuity" of drainage swales through sites even where modified by improvements.

Site development plans must demonstrate proper engineering practices to protect stormwater from carrying undesirable elements, before releasing water into the overall storm drainage system. Bio-filtration and particle settling areas are strongly encouraged.

Site drainage should be designed to minimize water collection near building foundations, entrances and service ramps and comply with all governing agency criteria.

4. VEHICULAR CIRCULATION AND PARKING DESIGN STANDARD

GOAL:

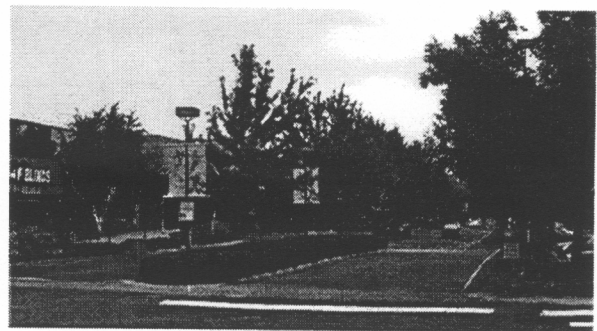
The Gateway District's highway, roadway, and on-site vehicular circulation and parking system is a critical factor in the image, safety and success of the overall Community and any related development. The access/circulation/parking system should provide for the safe, efficient, convenient, and functional movement of multiple modes of transportation throughout the District, as well as, both on and off the site where pedestrian/bicycle/vehicle conflicts are minimized. Alternate modes of transportation, including public transit, bicycles and pedestrians should be given priority in the overall District and as part of each individual site design.

To facilitate immediate and long range vehicular goals, an overall **Subarea Transportation and Access Plan** for the Gateway District has been established to control congestion, project long-term needs, and identify infrastructure requirements. All development within the district should facilitate the overall transportation network.

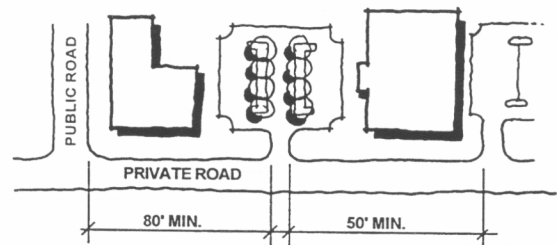
4.1 VEHICULAR ACCESS

Policy/Standard:

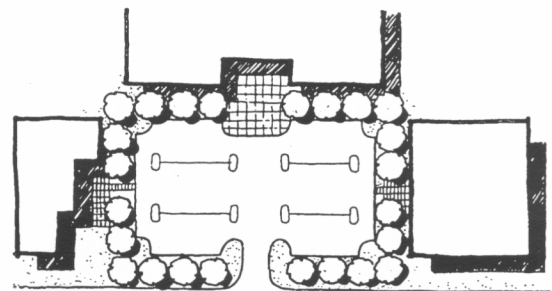
It is the intent of these standards to promote the safety and mobility of through traffic by minimizing the number of access points to private property from public highways and streets. Access points along arterial and collector roads are to be minimal, limited to those allowed by the **Sub-Area Transportation and Access Plan**, which are spaced to provide safe, clear and efficient service. Variations to the plan may be allowed if a comprehensive traffic analysis can demonstrate access will **not** diminish levels of service to adjacent projects. Projects should enhance entrance drives as "gateways" by incorporating consistent design treatments including signs, accent paving, special landscaping and lighting. Design elements should be visually interesting and consistent with other streetscape materials



DESIGN VEHICLE ENTRANCES AS ENHANCED "GATEWAYS".



MINIMUM SEPARATION BETWEEN INTERSECTIONS AND CURB CUTS



PROVIDE COMMON OR SHARED ENTRIES WHEN POSSIBLE.



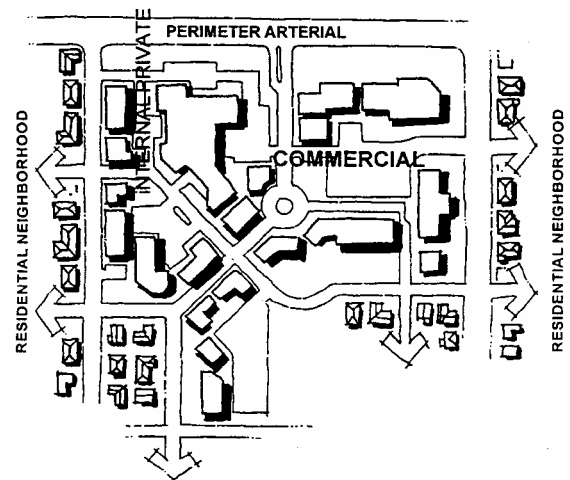
used in the overall development. Locate site access points as far as possible from street intersections in order that adequate stacking room can be provided. Maintain proper **minimum separation** between public and/or private road intersections and parcel curb cuts. All opportunities to establish cross property access is encouraged.

When the opportunity exists, provide common or shared entries. Locate site entries to minimize pedestrian/vehicular conflicts, and design these entries with enhanced paving to differentiate "crosswalks" from sidewalks. Design entrances to align with focal points within the development such as landmark towers or landscape features.

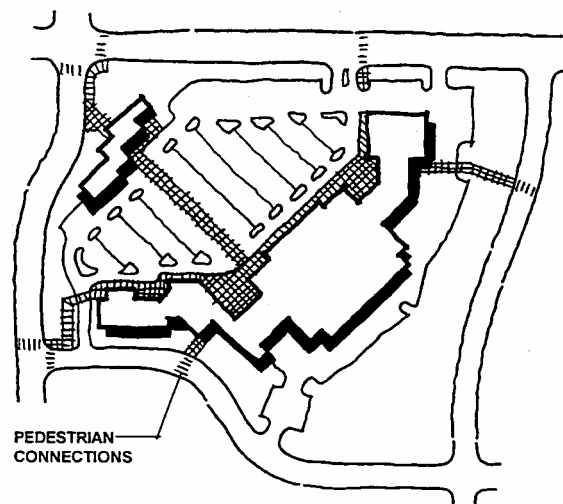
4.2 VEHICULAR CIRCULATION

Policy/Standard

From the overall Gateway District scale, to individual building sites, the vehicular circulation system should provide for a functional hierarchy of roadways such as: **1) Perimeter Arterial Streets; 2) Internal Private or Public Connector and Local Roadways; 3) Internal Private Drives; and 4) Service Drives.** The street, access and parking network should provide for the smooth, safe, convenient and functional movement of all modes of transportation, including vehicles, public transit, bikes and pedestrians with an emphasis to the pedestrian. The vehicular circulation system should link developments with surrounding areas by extending streets (public or private) and sidewalks. Separate parking aisles from vehicle circulation routes and entry drives. Internal roads and drives should reinforce natural and man-made landforms and lead drivers visually to



LINK COMMERCIAL DEVELOPMENTS WITH SURROUNDING AREAS.



PROVIDE SEPARATE VEHICULAR AND PEDESTRIAN CIRCULATION SYSTEMS WITH A STRONG EMPHASIS ON PEDESTRIAN LINKAGES.

building entries or other intended destinations. Allow for all required vehicle stacking distance and sight line distances.

4.3 PASSENGER DROP-OFF AREAS

Policy/Standard:

Passenger drop-off areas should be incorporated into all projects to provide for safe and convenient access to building entries, and provide a clear separation of vehicular traffic between drop-off zones and access to either a parking lot or parking structure. Use a textured paving material that is distinguishable from the travel lane at the drop-off, and use signs to indicate "drop-off zone".

4.4 SERVICE, DELIVERY, EMERGENCY AND UTILITY ACCESS

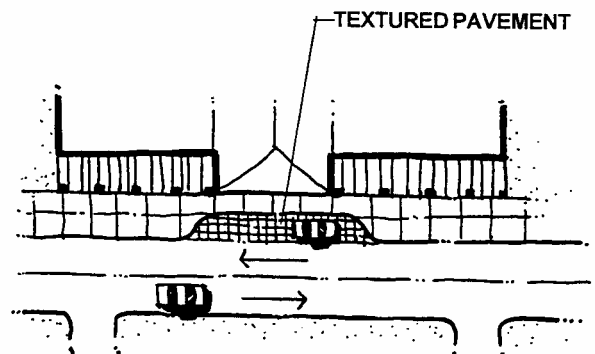
Policy/Standard:

Convenient and appropriate routes for all required service, emergency and utility accessways should be easily discernible and clearly marked. Vehicle circulation within a development shall be designed to provide safe and efficient turning movements for all anticipated service and emergency vehicles. The design of individual developments to accommodate truck access shall meet all regulatory requirements for turning radii without sacrificing other important objectives of safety and appearance. Where feasible, connect emergency routes between adjacent properties, and provide shared service and delivery accessways between adjacent parcels and/or buildings, where possible.

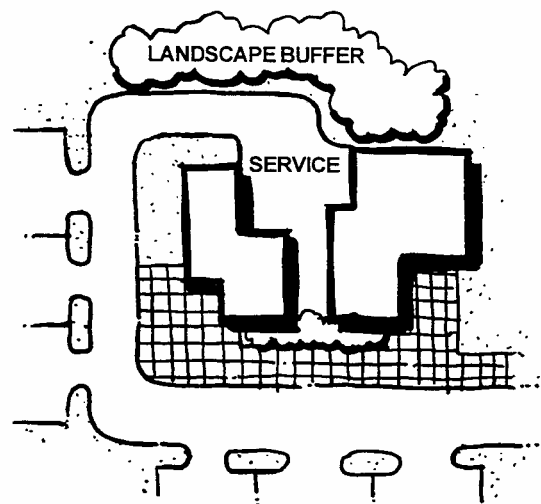
4.5 PUBLIC TRANSIT FACILITIES

Policy/Standard:

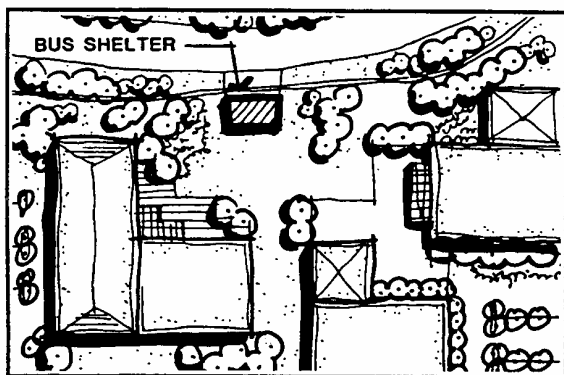
Public transit facilities should be provided within all developments to a level consistent with the Gateway district goal to accommodate high volumes of transit patronage. Provision for transit routes, access points, internal site circulation, and boarding areas should be addressed along all major roadways within and along the perimeter of all developments.



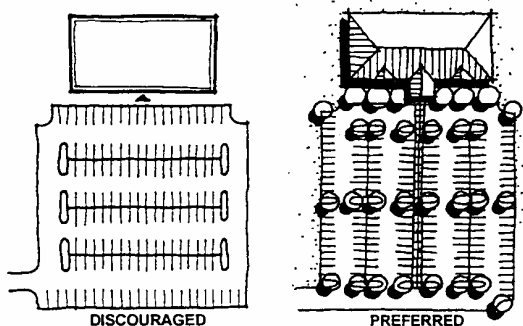
DESIGN DROP-OFF LANES SO AS TO NOT OBSTRUCT TRAFFIC FLOW AND USE TEXTURED PAVEMENT TO DELINEATE THIS ZONE. PROVIDE DIRECTIONAL SIGNAGE TO TRANSIT FACILITIES.



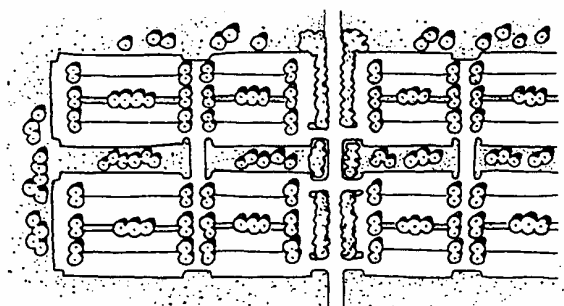
PROVIDE SHARED SERVICE AREAS BETWEEN BUILDINGS OR PARCELS WHEN POSSIBLE.



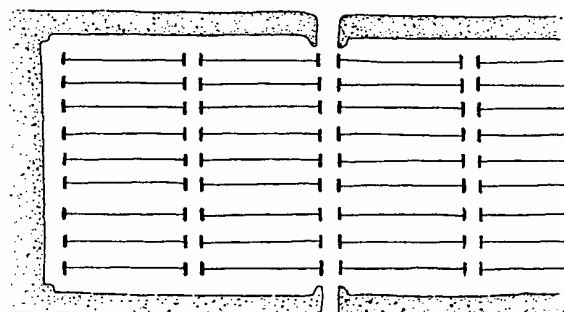
LOCATE BUS SHELTERS CLOSE TO SIGNIFICANT CLUSTERS OF BUILDINGS.



ORIENT PARKING AISLES PERPENDICULAR TO BUILDING ENTRANCES SO PEDESTRIANS WALK PARALLEL TO MOVING CARS.



DO THIS...



..NOT THIS

DIVIDE LARGE PARKING AREAS INTO A SERIES OF SMALLER, CONNECTED LOTS.

All sites with planned future employment of 1,000 employees or more should designate specific locations for future transit boarding areas at appropriate locations on internal or perimeter roadways. Such boarding areas should be designed and maintained in a manner that makes public transit an attractive, safe and convenient mode of travel for both employees and patrons. Transit boarding areas should be located close to building entrances of all large (>50,000 s.f.) buildings or clusters of buildings. Transit boarding areas should include attractive shelters with appealing character that are large enough to protect peak period standees from rainfall and should be designed in full accordance with the Americans With Disabilities Act.

Transit boarding areas should incorporate either a bus pullout bay (arterial roads and other roads with forecast traffic over 15,000 vehicles per day) or an on-street bus pad which in either case shall be consistent with RTD minimum design standards for such facilities. Pedestrian connections via sidewalks and walkways should be provided between building entrances and all transit boarding areas.

Planning and design of boarding areas should be coordinated with RTD.

4.6 SURFACE PARKING LOTS

Policy/Standard:

Vehicle parking should be provided to meet the location and quantity requirements of specific uses without undermining the function of other modes of transportation or detracting from the creation of attractive pedestrian environments. All parking lots shall be paved, screened with perimeter landscaping, provide safe, clear pedestrian connections to facilities and include landscape islands.

Separate parking areas from buildings by a raised walkway and landscaped area. Situations where parking spaces directly abut structures are discouraged. Orient parking aisles perpendicular to buildings so pedestrians walk parallel to moving cars and/or provide separate distinct pedestrian walkways. Design parking areas in a manner that

links buildings to the street sidewalk system as an extension of the pedestrian environment. Use design features such as walkways with enhanced paving, trellises, or special landscape treatments to achieve this objective. Divide parking areas which accommodate more than 100 vehicles into a series of smaller, connected lots where possible. Large projects (with more than 500 cars) will not be held to areas of 100 cars, but will require a comprehensive parking plan that demonstrates landscape mitigation techniques to reduce the visual impact of large parking lots. Use landscaping and off-setting portions of the lot to reduce the visual impact of large parking areas. Avoid aligning all travel lanes in parking lots in long straight configurations that facilitate speeding.

Minimum Parking Ratios:*

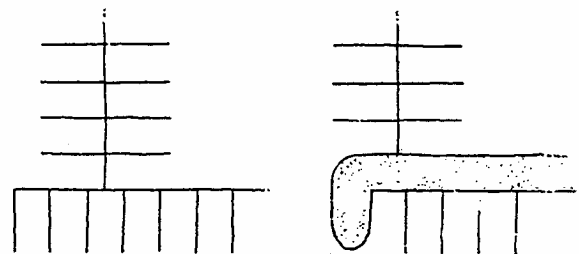
The minimum number of parking spaces required per parcel is based on the following ratios (# Parking Spaces/Gross Leasable Area):

• Retail Uses	5 spaces/1000 SF GLA
• Restaurants and Theaters	1space/3 seats
• Professional Offices	4 spaces/1000 SF GLA
• Warehouse Showroom	4 spaces/1000 SF GLA
• Hotel or Motel	1 space/guest room plus 1space/2 employees

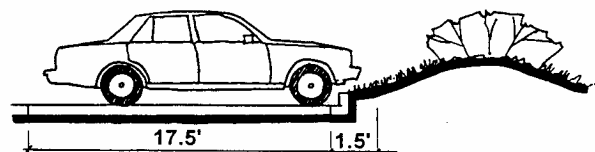
(* on large projects over 200,000 s.f., a comprehensive parking study may be provided as a basis to allow parking ratio adjustments. Shared parking and other parking reduction techniques are encouraged).

Provide spaces for the handicapped in accordance with local codes and ADA requirements. Provide ramps as required. Shared parking between different uses with staggered peak parking demand, is encouraged to reduce the total number of parking spaces within the development. Cross parking easements must be recorded.

Use curbed landscaped islands to designate a change in direction of parking stalls and aisles. Provide landscaped islands at the ends of all rows of parking and between every 20 linear car



USE CURBED LANDSCAPED ISLANDS TO SEPARATE A CHANGE IN DIRECTION OF PARKING STALLS AND AISLES.



PARKING SPACES MAY BE SHORTENED BY 1.5' WHERE THEY ABUT LANDSCAPED ISLANDS.

spaces minimum. Parking bumpers in surface lots are prohibited. Larger projects over 300,000 s.f. with large parking requirements should include a plan showing visual mitigation techniques to diminish the negative impact of lots. Such mitigation techniques will be considered as an alternative to the specific requirement of 1 island per 20 spaces.

4.7 PARKING STRUCTURES AND PARKING BENEATH BUILDINGS

Policy/Standard:

The use of well designed parking structures and parking beneath buildings is encouraged to provide close in spaces and maximize open space areas. The appearance of parking structures, whether free-standing or attached, should relate "architecturally" to the building they serve, and contribute positively to the character of any development. The incorporation of parking structures in a development is encouraged in order to minimize site coverage, however, the location of structures shall not negatively impact the development, adjacent properties, or the visual corridors of the district.

The general architectural criteria shall apply to all parking structures; specifically with regard to mass, scale, and materials. Provide convenient, weather-protected pedestrian connections between parking structures and main buildings, and at pick-up points. Atriums should be considered to let in light. Provide screening at all ground level parking and separate all structures from surface lots with planting areas.

4.8 PROVISIONS FOR FUTURE PARKING LOTS AND STRUCTURES

Policy/Standard:

Many large projects which are expected to be developed in phases, should anticipate and accommodate such phasing in the parking lot design. Provision should be made for increased parking demands related to anticipated expansions, and for possible changes in use of a building or complex of buildings. Where expansion of a building is planned, reserving

appropriate amounts of unimproved land for additional parking or making provisions for structured parking is required at the outset.

4.9 MOTORCYCLE PARKING

Policy/Standard:

Motorcycle parking should be provided to minimize parking areas, and designed and sited in such a way that it is clearly distinguishable from automobile parking. Parking stalls should be identified to encourage orderly positioning of parked motorcycles. Adequate security and visibility should also be concerns. Use concrete paving in these parking areas to support kickstand pressure. Provide motorcycle parking spaces in the following ratio: **1 motorcycle space/40 vehicle parking spaces up to a total of 10 spaces.**

5. PEDESTRIAN AND BICYCLE CIRCULATION DESIGN STANDARDS

GOAL:

The Gateway District will be a pedestrian-oriented environment where provisions are required to encourage walking for short trips, and for access to public transit.

All approaches to encourage pedestrian and bicycle circulation will be encouraged and required throughout the Gateway District.

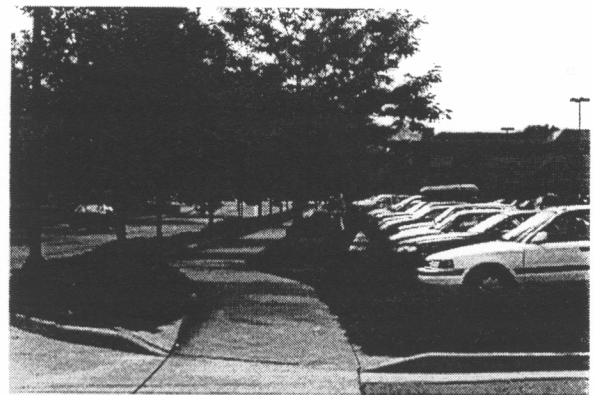
Pedestrian and bicycle systems shall be incorporated into all developments and designed to be safe and invite walking and bicycling throughout the project. Individual parcels and sites should be integrated with the overall community design to form a comprehensive system and to provide convenient access to the adjacent neighborhoods, developments, open space as well as the overall regional trail systems. A comprehensive non-vehicular circulation plan is encouraged.

5.1 OVERALL PEDESTRIAN AND BICYCLE CIRCULATION

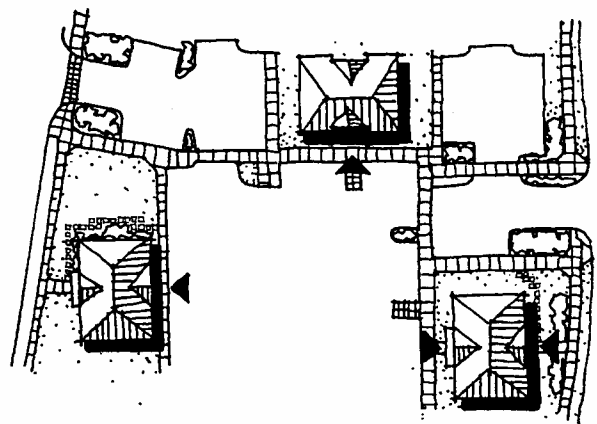
Policy/Standard:

Pedestrian and bicycle spaces and routes should be designed to invite walking and riding throughout and around each development. Routes should be fully integrated to form a comprehensive circulation system providing convenient, safe and visually attractive access to all portions of the site. Ease of maintenance should also be considered.

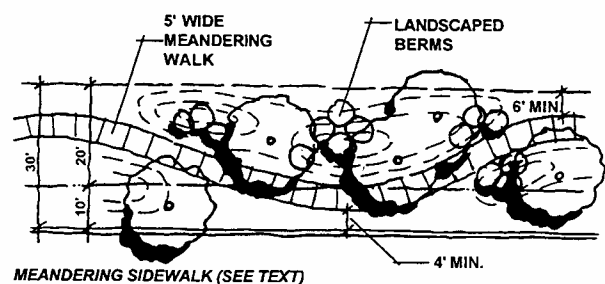
Locate buildings and design on-site circulation to minimize pedestrian/vehicle conflicts. Provide for the separation of pedestrian and vehicle movements with landscaping. Delineate areas of pedestrian and bicycle/vehicle interface with accent pavement and signage to alert drivers to potential conflicts. Locate and align walkways to



SEPARATE PEDESTRIAN AND VEHICULAR MOVEMENTS WITH LANDSCAPING, BARRIERS, OR OTHER APPROPRIATE DESIGN SOLUTIONS.

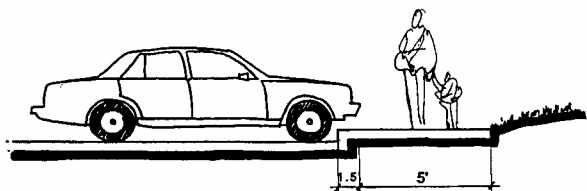


LOCATE AND ALIGN WALKWAYS TO CONNECT AREAS OF PEDESTRIAN ORIGIN AND DESTINATION.

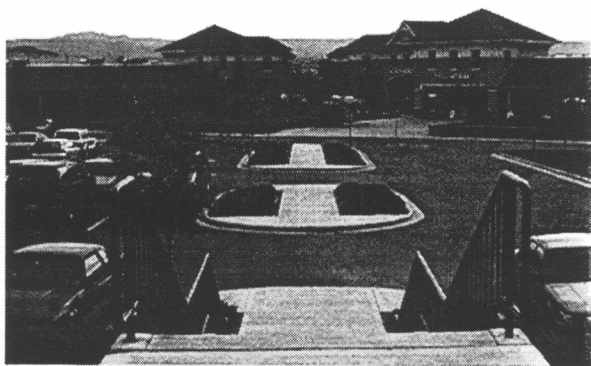


MEANDERING SIDEWALK (SEE TEXT)

directly and continuously connect areas or points of pedestrian origin and destination. Minimize pedestrian access and walks on the north sides of buildings where ice build-up occurs. Design sidewalks to be a minimum 8' wide for major walks and 5' wide for minor walks and detached from all arterial, connector and local public streets by a meandering minimum 6 foot wide landscaped plant zone. Note: If the appropriate width is not provided within the public R.O.W. to meet this criteria, a sidewalk easement will be required. Attached sidewalks are permitted only adjacent to internal drives, the front of parking stalls and designated drop-off areas outside of the traffic flows.



WALKWAYS SHOULD BE WIDENED BY 1.5' WHERE ATTACHED TO HEAD-IN PARKING STALLS.



PROVIDE CLEAR, CONVENIENT PEDESTRIAN ROUTES THROUGH PARKING LOTS.

5.2 PEDESTRIAN CONNECTIONS THROUGH PARKING LOTS

Policy/Standard:

Bikeways and pedestrian walkways should be separated and buffered from external and internal automobile circulation within parking lots to the extent possible. Walkways should be designed to lead pedestrians from parking areas to building entrances in order to facilitate convenient movement and minimize conflicts with cars. Pedestrians should feel comfortable that they are in a clearly defined pathway to the building. Pedestrians should not be required to cross drive-thru's or service areas to gain access to major entrances.

5.3 ACCESSIBILITY TO THE DISABLED

Policy/Standard:

All developments shall be equally accessible to both able and disabled persons. All developments are expected to meet or exceed all requirements of the Americans with Disabilities Act (ADA), and all amendments thereto.

5.4 SITE BARRIERS

Policy/Standard:

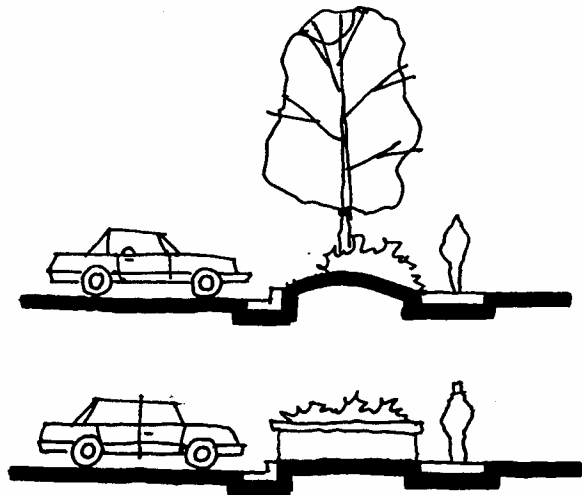
Barriers should be used to separate vehicular traffic from pedestrian and bicycle traffic for safety purposes, or to restrict access for security reasons. Barriers should be designed as visual assets to the development. Excessive numbers and types of barriers are not allowed. Typical barriers include fences, walls, gates, curbs, bollards, low shrubbery, and berms. Use materials that are similar to others used for site furniture or that relate to the building materials. Alternatives to conventional barriers may include: A change in level between a walkway and the surrounding area, and installing benches, seating walls, bike racks, or raised planters along the edge of a designated route to discourage cross-cutting.

5.5 BICYCLE ROUTES AND BICYCLE PARKING

Policy/Standard:

To encourage the use of alternative transportation modes, functional and attractive bike routes and bike parking should be provided in convenient locations and adequate for both customers and employees. Regional on-roadway commuter bike lanes will not be allowed on freeways, but will be required along all arterials and collector roadway corridors. An interconnected network of bike lanes will be part of each developer's site improvements. Off-road regional bike trails will also be interconnected through individual developments to create a "recreational" bikeway / pedestrian system. Each development will be required to provide on-road and off-road bikeways and sidewalks as needed to maintain continuity and connect each project to the overall regional system.

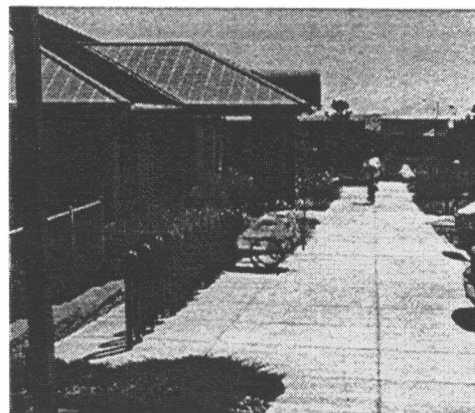
Locate lighted bicycle parking spaces near both customer and employee building entrances so they are convenient and highly visible. Provide bicycle parking spaces in the following minimum ratio: **One (1) bicycle space for every twenty (20) required off-street automobile parking spaces up to a total of 50 bicycle parking spaces** (quantities and locations of bike parking spaces for large projects (with GLA over 200,000 s.f.) should be reviewed/addressed with a comprehensive pedestrian plan for the site). Providing protection from the elements for bicycle parking is encouraged. Select bicycle racks that provide options for use by a range of bicycle types and locks.



USE LOW WALLS AND BERMS TO SEPARATE PEDESTRIAN AND VEHICULAR TRAFFIC.



LOCATE BICYCLE PARKING CLOSE TO BUILDING ENTRANCES.



PROVIDE RACKS THAT ACCOMMODATE A VARIETY OF BICYCLE TYPES.

6. TRANSIT DESIGN STANDARDS

GOAL:

The Gateway District lies along one of the most important transit corridors in the Denver region. Nearly 10,000 people per day board one of the RTD routes running on U.S. 36 and others patronize connecting routes and local circulators. These transit patrons are primarily professionals commuting to work in downtown Denver, downtown Boulder, and other employment centers in the region, and students commuting between jobs and classes.

At build-out, the study area will employ over 60,000 people, and by 2020, daily transit trips within and through the study area should approach 50,000 boardings.

The Gateway District will become one of the region's premier transit accessible destination, and will be developed as a pedestrian-oriented and transit-serviceable environment through the cooperative effort of the landowners, the City of Broomfield and the Regional Transportation District. This will set the area apart as a unique and desirable place to live, work, shop and dine.

6.1 OVERALL TRANSIT STANDARDS

Policy/Standard:

All sites and locations within the Gateway District will be accessible and serviceable by transit. Pedestrian-oriented design features will be used to support and encourage transit patronage and to ensure that boarding areas are well-integrated

into site plans. All District roadways will be designed to accommodate circulation by transit vehicles.

6.2 TRANSIT ROADWAY STANDARDS

Policy/Standard

All roadways within the Gateway District will be designed and built to allow access by transit vehicles. Parkway and collector roadway corridors, and principal access roadways shall be designed to enable circulation by regional transit vehicles (40' -45' vehicles). Preferred lane widths shall be 12' (10' minimum). Minimum vertical clearance of 16' 6" shall be provided. Design of any raised pedestrian crossings shall be coordinated with RTD. A minimum simple curve radius of 35' shall be provided at all intersections.

6.3 BOARDING AREAS

Policy/Standard:

Bus stops shall be located wherever possible at the far side of signalized intersections to minimize conflicts between motor vehicles, pedestrians and buses. Mid-block pedestrian crossings coupled with transit boarding areas may be used in locations where intersections are far apart. All boarding areas shall be designed in consultation with RTD and in a manner consistent with the "Creating Livable Communities" handbook published by (and available from) RTD.

7. ARCHITECTURAL DESIGN STANDARDS

GOAL:

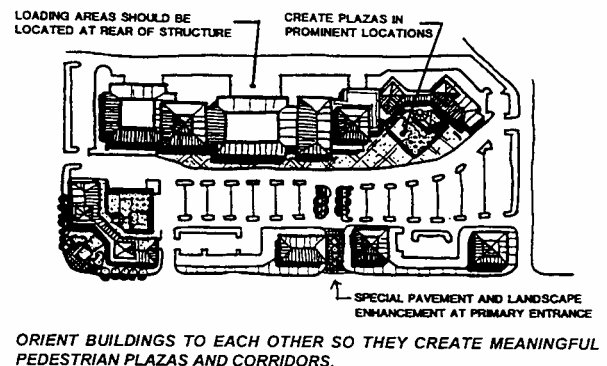
The goal of these architectural design standards is to promote development of high quality architecture. Buildings should convey an image appropriate to the specific use(s) and an enduring expression of this emerging community along the Highway 36 corridor. It is the intent of the Architectural Design Standards to provide flexibility for architectural design, while achieving a sense of continuity for the overall Broomfield Gateway District development. The Gateway corridor will develop over a number of years. Structures built later in development phases should express qualities and characteristics that will be shared with those developed in the early phases of construction.

These Standards apply to all buildings within the Gateway District, including retail, corporate campus, multi-tenant buildings, professional offices, hotel, recreation and transit station facilities. Additional architectural design standards for specific subdistrict buildings are included in subdistrict sections of these standards.

7.1 BUILDING RELATIONSHIPS AND COMPATIBILITY

Policy/Standard:

All buildings within a proposed development should relate visually and physically to one another, and be compatible with existing buildings on adjacent sites. Orient buildings so they preserve desired views from existing or proposed buildings nearby, and orient buildings to each other so they shape meaningful pedestrian plazas and corridors. Position entrances and courtyards so they relate to entries of adjacent buildings. Use creative architectural solutions where major topographic differences occur with special consideration to mitigating potential negative impacts. Strengthen compatibility by relating to adjacent building heights, setbacks, orientation,



mass, similar details, window forms, roof forms, materials, textures, and colors.

7.2 BUILDING HEIGHTS

Policy/Standard:

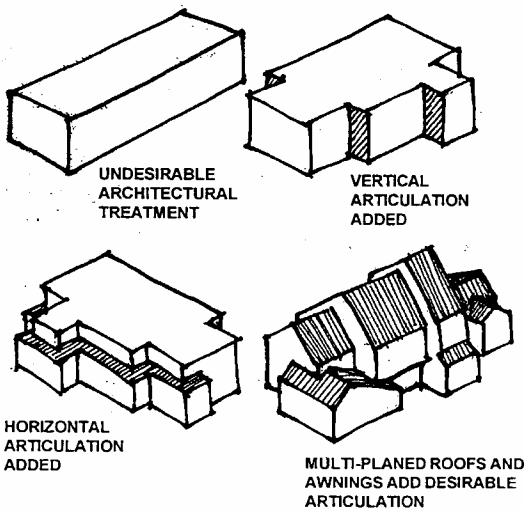
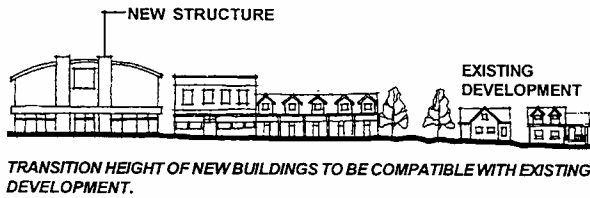
The overall sense of building heights throughout the Gateway District, within a development, should scale. Buildings should appear "anchored" closely to the ground in this gently rolling, open landscape. Building heights are expected (and desired) to vary, especially along the perimeter edges, stepping up in height as developments are further away from major arterials/ collectors.

Relate building heights to adjacent open spaces to: allow maximum sun and ventilation; provide protection from prevailing winds; enhance views of the natural setting; and minimize obstructions of views from adjoining structures. Provide compatibility and "transition" between the height of new development and that of existing development in the area.

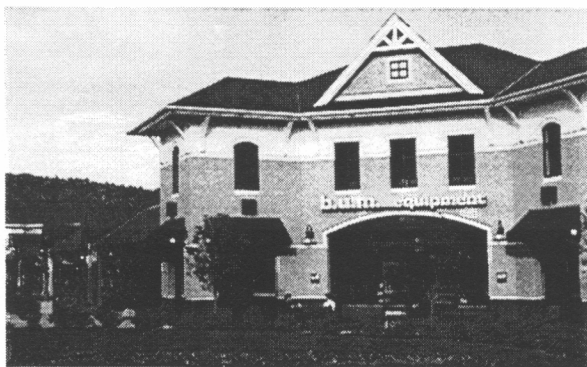
In general, use the following building heights and categories:

- | | |
|--|----------------------------------|
| 1. High Tech Research & Development: | Two (2) to six (6) stories |
| 2. Corporate Campus: | Two (2) to twelve (12) stories |
| 3. Corporate Offices: | Two (2) to ten (10) stories |
| 4. Professional Offices: | One (1) to six (6) stories |
| 5. Light Manufacturing, Aviation and Distribution: | One (1) to four (4) stories |
| 6. Commercial/Retail/Hotel | One (1) to thirteen (13) stories |
| 7. Multi-Family Residential | One (1) to ten (10) stories |
| 8. Transit Stations | One (1) to eight (8) stories |

Note: All heights shall comply with restrictions associated with Jeffco Airport.



BREAK LARGE BUILDINGS INTO MODULES OR SUB-PARTS TO REDUCE PERCEIVED SCALE.



USE A VARIATION IN FACADE ELEMENTS TO REDUCE PERCEIVED SCALE.

7.3 BUILDING MASSING, FORMS, AND PEDESTRIAN SCALE

Policy/Standard:

Buildings should relate to the natural and human-made terrain and each other in their massing and forms. Typically, buildings should appear to be built upwards from an aggregation of subordinate volumes. Larger masses should be located at the centers of building compositions, with smaller forms stepping down and outwards. Large, square or rectangular "box-like" structures are to be avoided. Facades with a high level of visual interest for both auto and pedestrian viewpoints are encouraged. The exterior character of all buildings should enhance pedestrian activity in their immediate vicinities. Buildings shall have architectural features and patterns that provide visual interest at the scale of the pedestrian, help to reduce mass, and provide local architectural character.

Perceiving the scale of a building in human dimensions is important in terms of a pedestrian's ability to relate to it comfortably. Building mass should be modulated to achieve a small human scale by subdividing large areas, and variations in color and/or texture. Step downs and setbacks should emulate the terrain and be reinforced by landscape elements. Variation in roof forms, materials, and height of roof elements are encouraged to reduce perceived scale.

Another recommended scale-reducing method is to express the floor levels on the exterior elevations. Wall planes should not run in a continuous direction more than 40 feet without an offset or other relieving elements (use windows, trellises, wall articulation, arcades, material changes, awnings or other features). Large scale buildings over 500,000 GLA should be allowed larger wall surfaces if visual impacts are mitigated through landscaping or other methods. Avoid blank walls at ground-floor levels. Architectural features such as columns, pilasters, canopies, porticos, awnings, brackets or arches should be included to create an interesting, inviting streetscape for pedestrians. Avoid locating walkways where users will be subjected to harsh environmental conditions. Covered walks or arcades are encouraged.

7.4 ROOF FORMS AND MATERIALS

Policy/Standard:

Rooftops should contribute to the visual continuity of each development and should be considered as design elements seen from various viewpoints: higher surrounding areas, at ground level, from other buildings, and from adjacent perimeter roadways. Roofs should also be interesting when seen from above in higher buildings and roof structures should be used to create a top to the buildings.

Mixing roof forms on buildings creates variety in the "roofscape". Avoid roof lines running in continuous planes. Offset or jog the roof planes to add visual interest, reduce the scale and break up long, continuous roof lines. Flat roofs are not encouraged. Roof materials should be of a high quality, durable and reflect consistent local architectural themes. The use of concrete tile, and standing-seam metal are appropriate roof materials. Conceal roof top mechanical units from view with architecturally integrated screening units, roof parapets, and sloped roof forms, as appropriate. Design roof forms to correspond to, and denote, building elements and functions such as entrances, arcades, porches, etc. Roof forms, whether sloping, hipped or gabled, should relate to adjacent buildings or developments. Where possible, develop roof tops as recreation and open space. Quality detailing, accent materials, ornamental ironwork, etc. are highly encouraged.

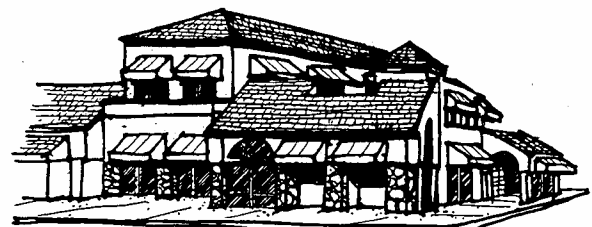


USE BUILDING MATERIAL THAT CAN VISUALLY BE MEASURED TO GAIN A SENSE OF HUMAN SCALE.

7.5 BUILDING MATERIALS AND COLORS

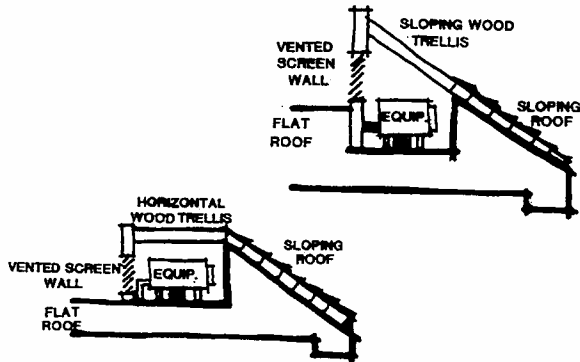
Policy/Standard:

Exterior materials and colors should be aesthetically pleasing, of a high quality and compatible with materials and colors of adjoining structures. Visual continuity in major building materials is desired throughout a development project consisting of multiple buildings.



MIX ROOF FORMS TO CREATE VARIETY IN THE "ROOFSCAPE".

Utilize a simple palette of color, and texture in the exterior material selection. Use natural, earthen materials manufactured in units measurable in human proportions.



SCREEN ALL ROOF EQUIPMENT WITH MATERIAL CONSISTENT WITH THE MAIN STRUCTURE.

- 1) Masonry, brick, and stone in their natural state are strongly preferred as principal cladding materials.
- 2) Textured concrete and architectural block may also be considered.
- 3) Wood is only appropriate in the context of similar adjacent development.
- 4) Stucco, modulated in jointed patterns, is also acceptable.
- 5) Precast concrete with appropriate detailing may also be considered.

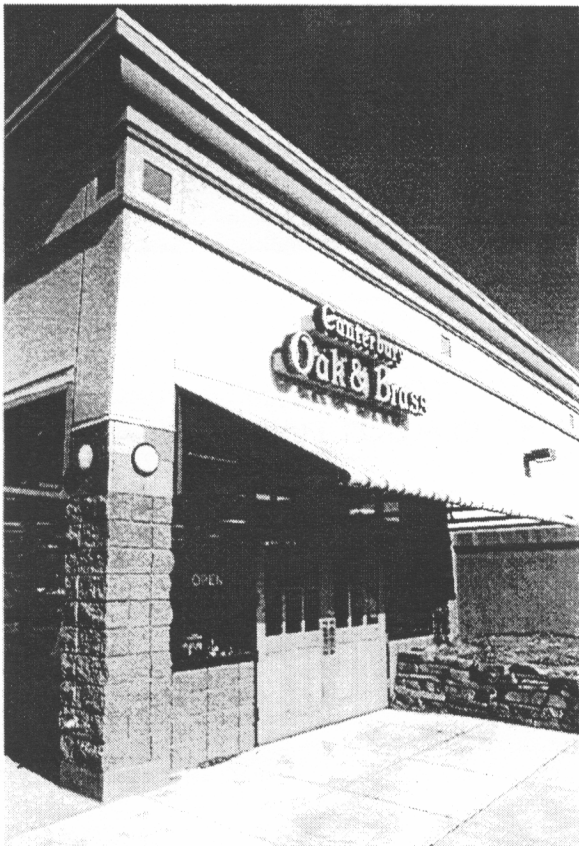
In most cases, select a single, dominant building material and minimize the number of accent materials. Use the same materials and colors on all elevations of a building. Avoid reflective materials such as bright aluminum and glass as the primary building material that will generate glare. Mirror glass is not allowed. Use heavier materials such as natural stone and masonry materials on the lower portions of buildings to help visually anchor them to the ground. High quality, low-maintenance materials are encouraged. Select building materials that will age with grace.

Choose color combinations for new buildings that are compatible with the colors of adjacent structures and keep their number to a minimum. Avoid large applications of unfamiliar materials or bright colors, (including bright white) that may streak, fade or generate glare. While subdued or muted colors generally work best as a dominant, overall color, a bright or primary color can also be appropriate for accent elements, such as door and window frames, and architectural details.

7.6 BUILDING ENTRANCES

Policy/Standard:

Primary building entrances should be easily identifiable and relate to human scale. Develop main entrances to be clearly identifiable from primary driveways and drop-offs. Design building entrances to contrast with the surrounding wall



USE HEAVIER MATERIALS AT LOWER PORTIONS OF BUILDINGS.

plane. Design primary entrances to positively be accessible to! handicapped users without complex ramp systems. Building; entrances should be well-lit. Use building entrance ways as a transition from the building to the adjacent landscape.

7.7 SERVICE ENTRANCES AND LOADING AREAS

Policy/Standard:

Service areas should be visually unobtrusive and should be integrated with the site design and the architecture. Orient service entrances, loading docks, waste disposal areas and similar uses toward service roads and away from major streets. Screen service areas with walls and/or landscaping. Utilize! shared service drives where feasible. Avoid placing service; areas where they will be visible from adjacent buildings or where they will negatively impact important/identified view corridors.

7.8 ENERGY CONSERVATION MEASURES

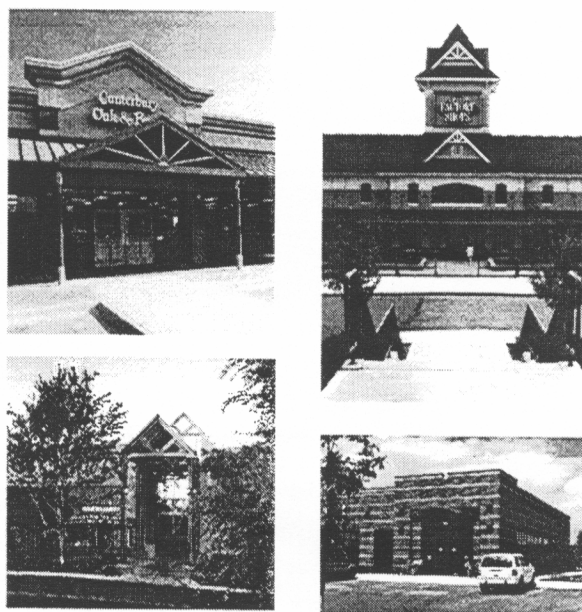
Policy/Standard

Efforts to conserve energy and other natural resources will be required in the design of each building. Local climate conditions afford the opportunity to take significant advantage of passive and active solar energy applications. Buildings should be designed and sited to maximize the use of solar gain for energy savings, and respect the solar access requirements of adjacent (existing and proposed) buildings.

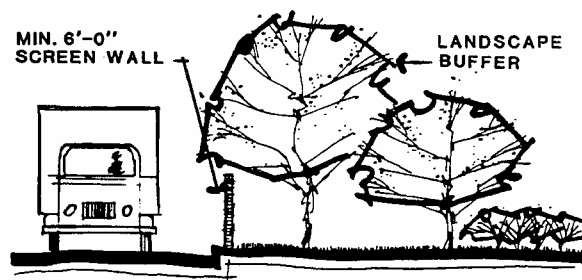
Energy conserving concepts to be considered shall include, but are not limited to the following:

- 1) Building shape, mass, orientation and placement. Orient buildings to take advantage of the prevailing summer winds and to buffer against adverse winter winds
- 2) Clustering buildings
- 3) Types of materials, and their insulation characteristics.
- 4) The arrangement and design of windows and doors.
- 5) Direct solar or photovoltaic energy.

- 6) Daylighting concepts.
- 7) Earth sheltering with creative land forming.
- 8) Natural ventilation of outdoor, indoor and attic spaces.



DEVELOP MAIN ENTRANCES TO BE CLEARLY IDENTIFIABLE.



SCREEN SERVICE ENTRANCES AND TRASH DUMPSTERS WITH WALLS AND/OR LANDSCAPING.

8. LANDSCAPE AND IRRIGATION DESIGN STANDARDS

GOAL:

Landscaping and decorative elements including fences and walls for all development areas shall be provided within each building site to: 1) enhance the aesthetics of the development, 2) create a pedestrian friendly environment, 3) break up the mass of buildings, 4) soften architectural materials, 5) provide screening of service areas, 6) enhance the streetscape/parkway environment, 7) define building and parking area entrances, 8) provide shade and climate control, and 9) provide buffers between incompatible land uses. Water conservation efforts will include the use of drought tolerant plant species, native to the region.

The Landscape Design Criteria addresses 4 distinct zones; corresponding to the 4 major design influences on each commercial site.

- 1) *Perimeter Landscaping Adjacent to Public Roads*
- 2) *Perimeter Landscaping Adjacent to abutting property*
- 3) *Parking Lot Landscaping*
- 4) *Individual Building Landscaping*

Note: Plant spacings shown are to quantify numbers of plants not "typical" spacings, and clustering of plants in natural patterns is highly encouraged.

8.1 PERIMETER LANDSCAPING ADJACENT TO PUBLIC AND PRIVATE ROADS

Policy/Standards:

Roadway corridors throughout the Gateway District shall provide a visually cohesive landscaped system. Similar landscape treatments should be used at all entrances and intersections. Plant materials, massing, spacing, and height characteristics should convey the hierarchy of roadways. Planting and grading should work together to create a variety of experiences along these roadways and to call attention to open space amenities.



INCLUDE A COMBINATION OF MANICURED AND ENHANCED NATURAL LANDSCAPE AREAS.



CREATE LANDSCAPE POCKETS IN FENCES AND WALLS WHERE POSSIBLE.

The following landscape treatments should be incorporated for these site conditions:

Entries:

Include a combination of manicured and enhanced natural landscape areas, at entries and project identification markers along the perimeter edge of all development sites. Provide a minimum of 3 levels of scale, including shade, evergreen, and/ or ornamental trees, shrubs, annual and perennial flowers, and ground covers. Integrate the plant design with the entry sign. Plantings should frame or provide a visual base for the signs.

Fences & Walls:

Off-set long expanses of fence and wall surfaces to create landscape pockets wherever possible.

Roadway and Median Plantings:

Vary street tree planting species in medians and parkways to enhance the streetscape experience and provide rhythm of plantings by selecting street trees with similar characteristics (i.e., height and branching patterns).

Detached Walks:

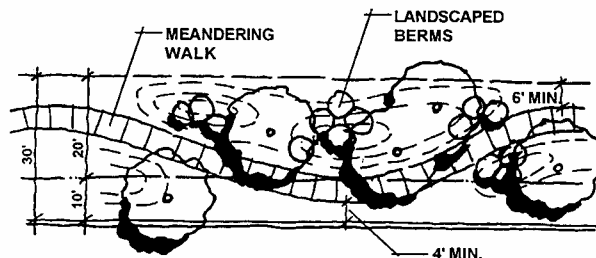
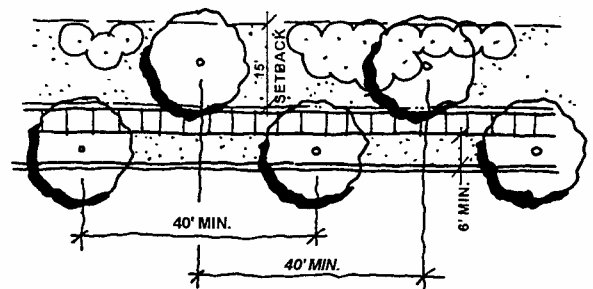
Provide a **minimum of 1 tree per 40 lineal feet** of street frontage between the sidewalk and curb, and an **additional 1 tree and 10 shrubs per 40 lineal feet** of street frontage within 10 feet outside the sidewalk, internal to the development.

Attached Walks:

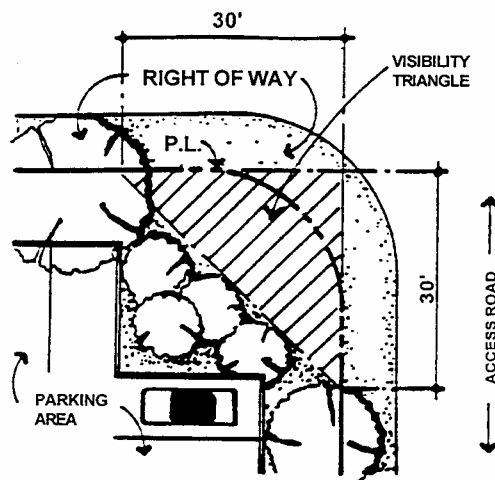
Provide a minimum of 1 tree per 20 lineal feet of street frontage within 15 feet of the edge of the sidewalk and a minimum of 5 shrubs per tree plus perennial flower beds, ground cover or grass lawn is required within 20 feet of the edge of curb.

Meandering Sidewalks:

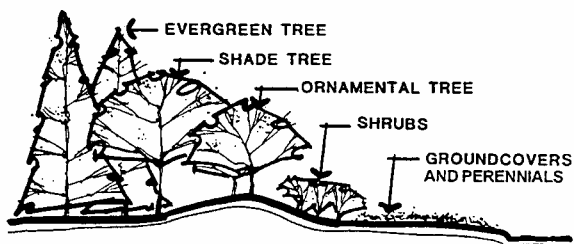
Provide a **minimum of 1 tree per 20 lineal feet** of street frontage and accompany the trees with a variety of shrubs and ground covers and make berming an integral component of the landscape design. A **minimum of 10 shrubs per tree plus perennial flower beds, ground cover or grass lawn** is required.



LANDSCAPE REQUIREMENT DIAGRAMS



TYPICAL SIGHT LINES AT INTERSECTIONS



PROVIDE A MINIMUM OF 3 LEVELS OF LANDSCAPE SCALE AT ENTRY DRIVES.

Sight Triangle:

Provide adequate sight-lines for an effective **sight triangle** per the City codes. Plant **parkways with landscape materials** that do not interfere with the visibility of the motorist. Plant trees a **minimum of 3 feet from the back of curb** and choose shrubs that **do not exceed mature heights as required by City Code**.

8.2 PERIMETER LANDSCAPING ADJACENT TO ABUTTING PROPERTY

Policy/Standards:

Visual buffers should be provided between similar land uses to accomplish transitions and to mitigate potential conflicts between dissimilar uses.

The following landscape treatments should be incorporated for these site conditions:

Between similar uses (i.e., where a large scale commercial/ retail use abuts a small scale retail use or office complex):

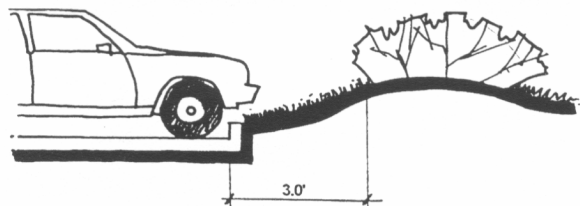
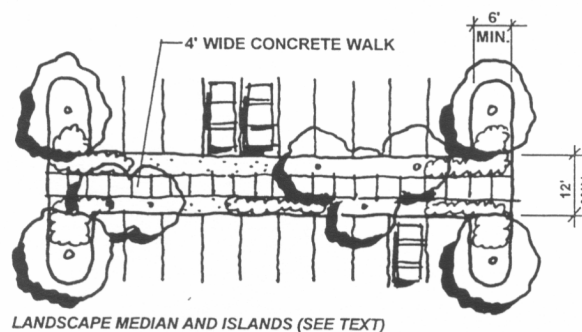
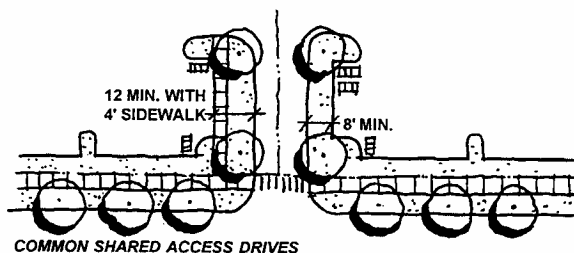
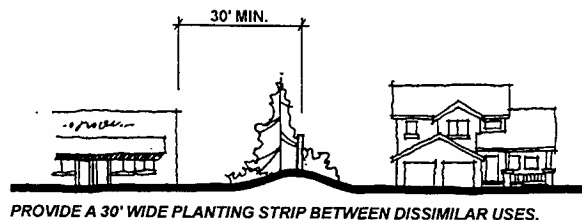
Provide a **minimum 15 foot wide buffer planting strip** next to a property line containing **1 tree for every 20 lineal feet of property line** and a **screen hedge** incorporating both deciduous and evergreen shrubs a **minimum of 3 feet in height** (at maturity) along a **minimum of 50% of this perimeter area**.

Between dissimilar uses (i.e., where a commercial/retail use abuts a residential area):

Provide a **minimum 30 foot wide buffer planting strip** incorporating a **minimum 3 foot high berm** containing a **minimum of 1 tree for every 20 lineal feet of property line** and a **screen hedge** incorporating both deciduous and evergreen shrubs a **minimum of 5 feet in height** (at maturity) along a **minimum of 50% of this perimeter area**.

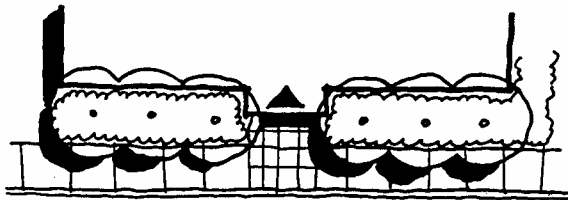
Common/Shared Access Drives:

Provide a **minimum 8 foot wide buffer strip** along both sides of a shared access drive when no sidewalk is included. Provide a **minimum 12 foot wide buffer strip** along both sides of a shared access drive where a sidewalk is included.

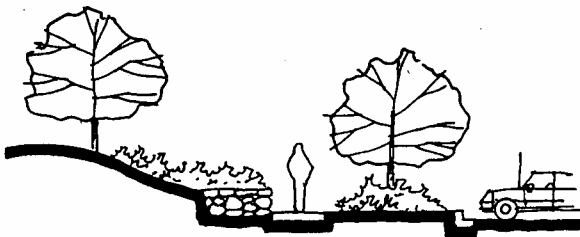




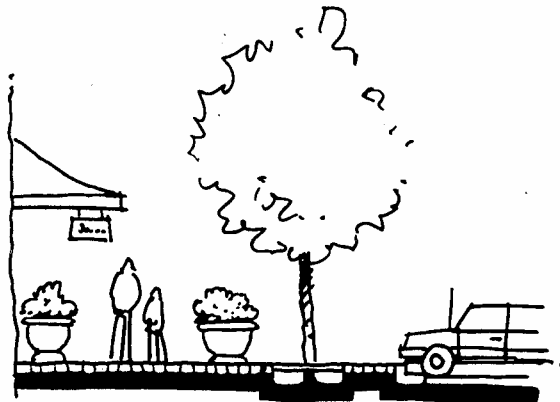
EMPHASIZE AND INTENSIFY LANDSCAPE AT BUILDING ENTRANCES, INCLUDING FLOWER BEDS WITH A VARIETY OF PERENNIALS, ANNUALS, GROUND COVERS AND ORNAMENTAL GRASSES.



PROVIDE LANDSCAPING AROUND BASES OF BUILDINGS (SEE TEXT).



PROTECT LANDSCAPING FROM PEDESTRIAN AND VEHICULAR TRAFFIC WITH ATTRACTIVE BARRIERS.



USE CONTAINERS WITH FLOWERING PLANTS TO ENHANCE SIDEWALK SHOPS, PLAZAS AND COURTYARDS.

8.3 PARKING LOT LANDSCAPING

Policy/Standards:

Parking lots are necessary features of building sites that can, if not designed properly, visually detract from the overall development character. Parking lots within the Gateway District should be designed to blend with each building site's character using landscape plantings and grading.

The use of low, opaque walls and/or colorful landscaping combined with berming will screen parking from peripheral streets. Where practical, lower the grades of parking lots below existing street elevations to minimize visual impacts, while promoting views of architectural elements. Landscape a minimum of **(10% up to 500 car lots, 8% up to 1,000 car lots; 5% above 1,000 car lots) of each total parking lot** (excluding perimeter landscaping). A **minimum of 1 tree per 10 parking spaces** (average equivalent) is required in all parking lots, to be planted in islands, medians, and perimeter areas adjacent to lots (excluding streetscape tree plantings). Utilize **landscaped islands and medians** to improve the definition of circulation patterns, provide shading for paved areas and break up continuous rows of parking.

Incorporate 6' foot (per drawing) minimum wide **landscaped islands** at the end of every row of parking, and provide a **minimum of 2 shade trees in each island**. In addition to the trees, plant each island with a **minimum of 8 shrubs, not exceeding 3 feet in height at maturity**.

Landscaped Medians should provide a **effective pedestrian walkway a minimum 4 feet wide**, exclusive of car overhangs. Where walkways in medians will not be utilized, the medians may be **reduced to a width of 8 feet**. Place landscape medians between every fourth parking bay in lots for more than 100 cars. Provide a **minimum 1 canopy shade tree and 8 shrubs for each 30 lineal feet of median** (average equivalent - clustering encouraged). The use of landscape medians is encouraged as a transition slope between parking bays on hillside parking lots (maximum slope of 4:1).

8.4 BUILDING SITE LANDSCAPING

Policy/Standards:

The coordination of landscape design within the Gateway District, for individual building sites and larger, multi-parcel projects is essential for creating a consistent, high-quality character. A cohesive design unifies the various buildings and strengthens the cohesiveness of the development. Individual landscape treatments for building sites must complement the roadway landscapes, create distinctive settings for buildings, help reinforce the design of the open space system and provide a transition for pedestrians.

Use landscaping that is of appropriate scale and emphasize landscaping at building entrances to provide focus and accent. Provide landscaping around the bases of buildings to soften the edge between sidewalks/parking lots and structures.

The **Minimum Landscape Area required within each building site shall be 25%**, (see also 3.2, including parking lot landscaping, hardscape plazas, and walkways.)

8.5 LANDSCAPE IRRIGATION/ WATER CONSERVATION

Policy/Standard:

Every effort should be made to conserve water by utilizing alternative means for maintaining a suitable landscape environment. In areas where irrigation systems are utilized, water conservation should be emphasized through the use of water efficient systems and the selection of plant materials with low water requirements.

Incorporate a **"zoned planting scheme"** to reduce water demand by grouping similar varieties of native plants that are drought and disease tolerant together. Limit the use of blue grass. Incorporate heavily mulched planting beds to aid in retaining moisture and make planting areas easier to maintain. Improve the soil prior to planting for better water absorption and retention. Install an efficient automatic irrigation system that will incorporate water conservation measures.

8.6 LANDSCAPE STANDARDS AND PLANT MATERIAL SELECTION/PLANT SIZE STANDARDS

Policy/Standards:

For a strong visual impact plants should be used in masses of the same species and rows or clumps of the same trees. Random spotting of many different types is not appropriate. Planting should reinforce the site planning concepts and complement architectural forms.

Landscape development within the Gateway should fall into one of the following zones:

High Maintenance Zone (located at site and building entrances and pedestrian areas):

These area manicured lawns which require weekly mowing and regular watering, formal plantings of trees and shrubs, and planters, with annuals and perennials.

Medium Maintenance Zone (located along perimeter roadways and at building entrances):

These are native grasses which require less water and maintenance, large shrubs, and large specimen trees.

Low Maintenance Zone (located in environmentally sensitive areas, along waterways and open space areas):

These are existing vegetation and natural areas with drought resistant plant species including meadow/open fields, and wetlands areas.

The following design considerations should be taken into account when selecting plant materials:

Choose plant materials that provide variety and year-round color and screening. Plant annual and perennial flower beds in visible areas such as pedestrian plazas, building entries and vehicular entries, to create color, texture and interest. All planting beds should be mulched with wood or rock to stabilize soils, control erosion, and conserve water use.

8.7 LANDSCAPE MAINTENANCE AND REPLACEMENT

Policy/Standards:

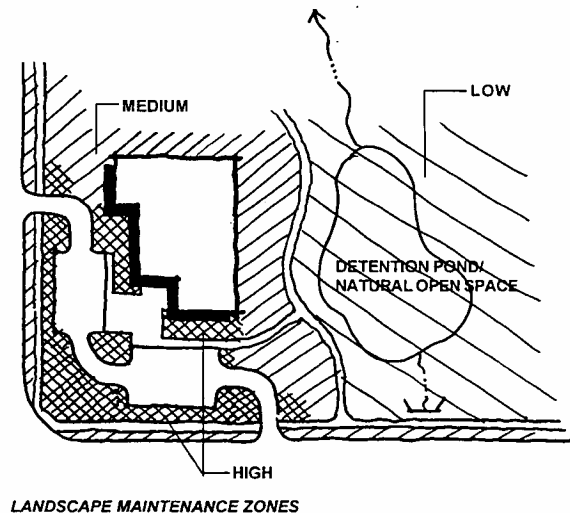
The property owner is responsible for providing, protecting and maintaining all landscaping in a healthy and growing condition. The property owner will remove and replace dead or diseased plant materials immediately with the same type, size, and quantity of plant material as originally installed.

8.8 EXISTING VEGETATION

Policy/Standards:

Special attention should be paid to preserving significant natural features and vegetation within the Gateway District. "Significant" is considered to be any vegetation of unique character due to its history, size, variety, or growth habits. This includes all mature trees greater than 3 inches in diameter and significant understory plants and shrubs. Specific requirements include the following:

Locate site and building improvements to preserve significant natural vegetation. Preserve and incorporate into the landscape plan, if possible, any existing healthy tree 3" caliper or larger, and located more than 20 feet from any proposed building location. Preserve all existing trees over 24" caliper unless deemed unhealthy or unsuitable for preservation. During construction of site improvements, erect suitable protective barriers around trees to be preserved, making sure trunks, branches and root structures are not damaged by construction equipment (generally located beyond the drip line). Incorporate tree wells or retaining walls as necessary in the landscape plan to protect existing trees. Maintain historic drip lines.



8.9 WALL AND FENCE DESIGN MATERIALS

Policy/Standards:

Fencing and walls shall be constructed of materials that are compatible with the adjacent building architecture and their appearance softened with landscape materials whenever possible.

In general, **avoid using retaining walls in excess of 72 inches in height.** Where taller retaining walls are required near pedestrian zones, provide safety protection in the form of railings, fences or hedges or create a terrace with two (2) shorter walls. Incorporate architectural treatment on both sides of perimeter walls, and provide landscaping to soften their appearances. Break up long expanses of fences or walls with periodic columns, insets or change in materials. When walls or fences are required, construct them from durable materials such as stone, brick, or metal with dark finishes (wrought iron or similar), or a combination of these materials. Chain-link and wood are not acceptable screening materials.

8.10 SCREENING REQUIREMENTS

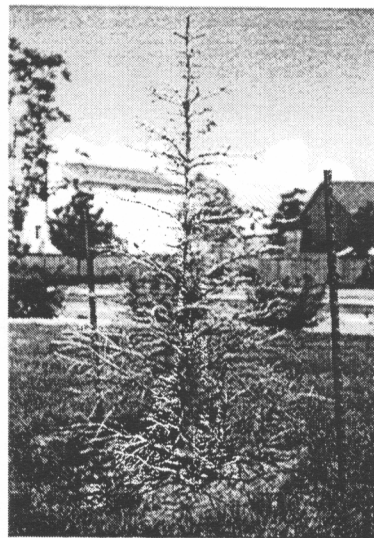
Policy/Standards:

Integrate walls and fences into the building architecture and site design and set at an appropriate height to accomplish adequate screening of meters, transformers, loading, and service areas.

Make screening for loading docks and service areas a minimum of 6 feet high and constructed of finishes compatible with the main building. Conceal all materials, supplies, trucks, or equipment stored on a site inside a closed building or behind a visual screen. All noise pollution and noxious odors shall be mitigated.



PLANT FLOWER BEDS IN VISIBLE AREAS.



REMOVE AND REPLACE DEAD OR DISEASED PLANT MATERIALS IMMEDIATELY.

9. EXTERIOR SITE LIGHTING DESIGN STANDARDS

GOAL:

Exterior lighting should be used to provide illumination for the security and safety of entry drives, parking, service and loading areas, pathways, courtyards and plazas, without intruding on adjacent properties. Site lighting shall be architecturally compatible and consistent in design between sites.

9.1 FIXTURE DESIGN AND ILLUMINATION LEVEL

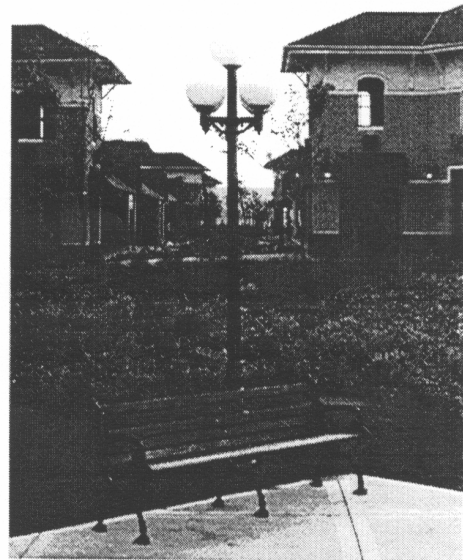
Policy/Standard:

Exterior light standards should be designed as a "family" of compatible fixtures which relate to the architectural character of the buildings on a site. Site lighting should be provided at the minimum level (per City Standards) to accommodate safe pedestrian and vehicle movements, without causing any off-site glare. Meet all regulatory requirements for lighting.

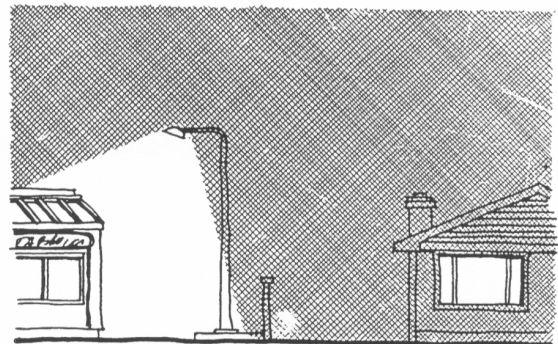
Poles and fixtures should be architecturally compatible with structures and lighting on adjacent properties. Illuminate all intersections and perimeter public roads with similar poles and fixtures. Select and locate all lighting fixtures to shield or confine light spread within a site's boundaries and to eliminate light directed towards the sky. To facilitate security, specify lighting levels that are adequate for visibility, but not overly bright. All building entrances should be well-lighted.



LIGHTING SHOULD BE A "FAMILY" OF COMPATIBLE FIXTURES WHICH RELATE TO ARCHITECTURAL CHARACTER.



POLES AND FIXTURES SHOULD BE COMPATIBLE WITH ADJACENT STRUCTURES AND LIGHTING.



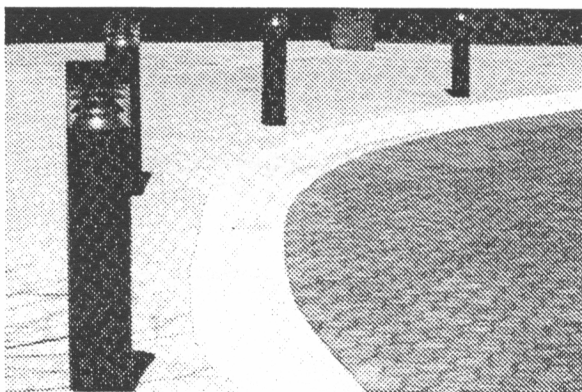
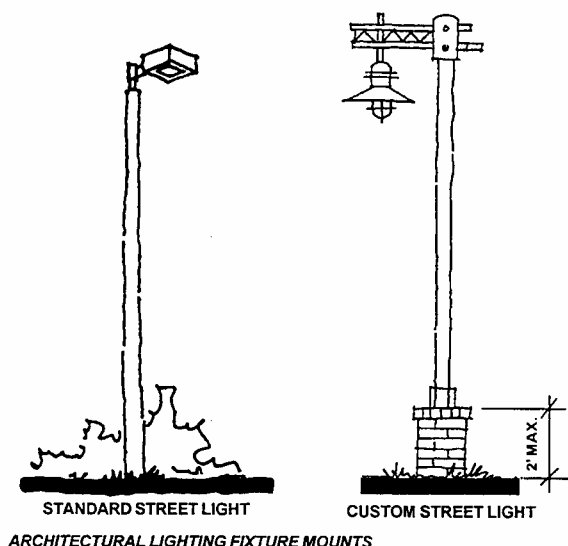
SELECT AND LOCATE LIGHT FIXTURES TO CONFINE LIGHT SPREAD.

9.2 DECORATIVE ARCHITECTURAL LIGHTING

Policy/Standard:

Special lighting that accents building features and creates visual interest is permitted in the Gateway District, provided that design continuity is maintained among buildings.

Lighting fixtures mounted directly on structures may be allowed when utilized to enhance specific architectural elements or to help establish scale or provide visual interest. Integrate illuminators or fixtures used to light building mounted signage, building facades or pedestrian arcades, into a building's architectural design. Consider highlighting entrances, art, terraces, and special landscape features.



USE LIGHTED BOLLARDS TO IDENTIFY PEDESTRIAN AREAS.

9.3 PARKING LOT, PEDESTRIAN, LANDSCAPE LIGHTING

Policy/Standard:

Parking lot lighting should be unobtrusive, and should not attract attention to itself, but rather provide safe light for orderly functions.

The fixtures should be uniform in design and provide adequate lighting for all areas. Select metal halide lighting with a concealed light source of the "cut-off" variety to prevent glare and "light trespass" onto adjacent buildings and sites. Emphasize pedestrian ways through parking lots with lighting.

Walkway lighting should be scaled to the pedestrian (10'-16' ht.) and provide for safe passage particularly in areas which are dangerous, such as stairs, ramps, intersections, and underpasses.

The use of lighted bollards with incandescent or metal halide lamps or other low level fixtures is encouraged to identify pedestrian walkways and drop-off areas at entrances to buildings. Emphasize pedestrian-to-vehicle intersections with low level decorative street lights.

Landscape lighting should enhance and complement the landscape materials in the night-time hours.

The design of the landscape lighting should work for all seasons of the year and through the life of the landscape. When mounting from tree locations, consideration of the mature size of the plant and surrounding plant life will help achieve the desired effect. Conceal fixtures where possible (i.e. in trees, by landscape, behind rocks), control glare, and avoid extreme bright spots on the surrounding landscape.

10. EXTERIOR SIGNAGE DESIGN STANDARDS

GOAL:

Signs should contribute to the visual continuity of the development, but should be subordinate to architectural and landscape elements. Signs serve important functions in areas used by the public. They identify, inform, direct, regulate and interpret. Buildings within the Gateway District should have a consistent and comprehensive sign program from project identification at the street through individual tenant suite identity. Consideration must be given to sign location, layout, organization, and length of message, the typeface, the design of supporting structures, and the compatibility with other signs in the system. All projects in the Gateway District involving more than 200,000 SFGLA shall provide a comprehensive signage design program plan to demonstrate that the proposed signage will meet the general intent of this section and to allow variation from these standards. These guidelines will apply if no comprehensive program is provided.

10.1 SIGN MATERIALS

Policy/Standard:

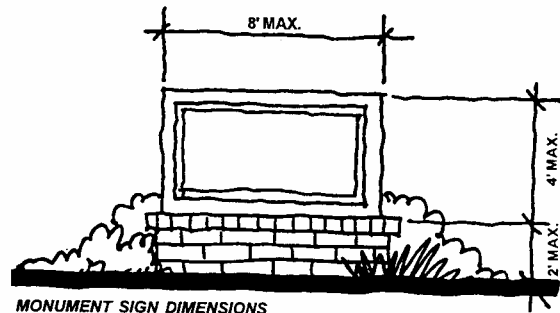
Design and construct signs of durable, high quality architectural materials.

Utilize materials and colors in the sign system that are architecturally compatible in color and design with the associated structures and that do not detract from the architectural character or aesthetic appeal of the community. Signs for similar purposes should be consistent in style and detail.

10.2 SIGN SHAPES AND SIZES

Policy/Standard:

The size of signs should be modest and afford businesses sufficient visibility and identification without becoming a dominant part of the landscape or interfering with vehicular movement



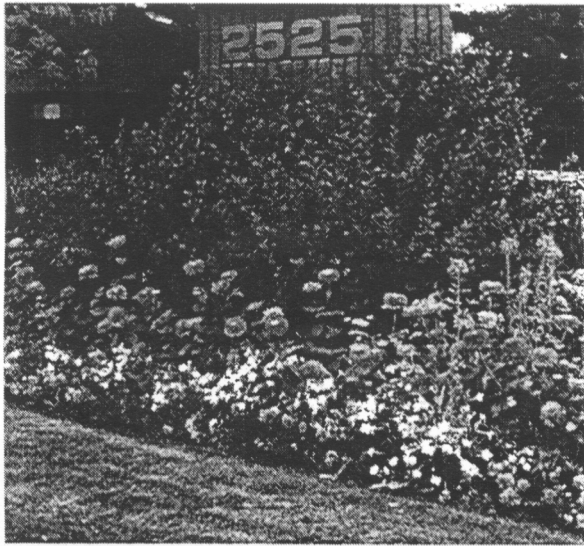
MONUMENT SIGN DIMENSIONS



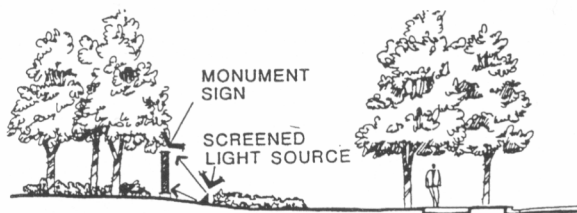
FREESTANDING SIGNS MUST BE GROUND-MOUNTED AND MAY BE DOUBLE FACED.



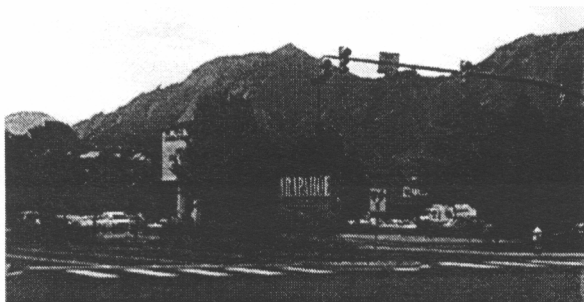
FLUSH MOUNTED SIGNS (SEE TEXT)



LOCATE MONUMENT SIGNS IN A PLANTER SETTING WITHIN A LANDSCAPED AREA.



EXTERNAL LIGHT SOURCES DIRECTED AT SIGNS SHOULD BE CONCEALED FROM PEDESTRIANS' AND MOTORISTS' "LINES OF SIGHT".



USE MONUMENT SIGNS AT THE STREET OR PRIMARY ENTRIES TO PROVIDE PROJECT IDENTITY.

along the public streets. Sign size shall be consistent with and conform to the City of Broomfield Sign Code. Sign forms should be simple and act as subordinate elements in the landscape.

The following conditions shall apply to all signage within the Gateway District.

One **freestanding sign** is allowed per development project and must be of a ground-mounted monument type. The display area shall **not exceed 32 square feet** and the vertical dimensions of the monument sign display area shall be **no** greater than 4 feet with the top of the sign being **no higher than 6 feet** from grade level. The horizontal dimensions of the monument sign display area shall be no greater than 8 feet. The **total allowable area of flush-mounted signs** on buildings shall be computed by the following formula: 1 square foot of sign area per lineal feet of building frontage of the individual business, subject to the provisions of the City's Sign Code up to a **maximum total sign area of 200 square feet per elevation**. Flush mounted signs are limited to 2 building elevations. The **maximum number of flush-mounted signs** allowed for each free-standing building is 3. If a small monument sign is desired as well, the total allowed flush-mounted signs is 2. The exception to this is the provision of sign bands/panels above the store fronts within a cluster of small retail businesses. Use simple, straight-forward shapes that convey the message clearly. Signs as symbols are encouraged because they are easily read and enhance pedestrian interest.

10.3 LOCATION/PLACEMENT/ VISIBILITY

Policy/Standard:

Signs shall be located to be visible and legible from streets and paths without conflicting with safe vehicular or pedestrian movement and visibility.

Monument signs should be located in a planter setting within a landscaped area, and a **minimum of 8 feet from the right of way** so as to not obstruct visibility at intersections.

10.4 SIGN ILLUMINATION

Policy/Standard:

Sign illumination should complement, not overpower, the image of the building and its immediate landscaping.

The use of individually-cut, back-lit letter signs is strongly encouraged. When external light sources are directed at the sign surface, conceal the light source from pedestrians' and motorists' "lines of sight". Avoid light spill onto adjacent areas. Flashing signs are not permitted under any circumstances.

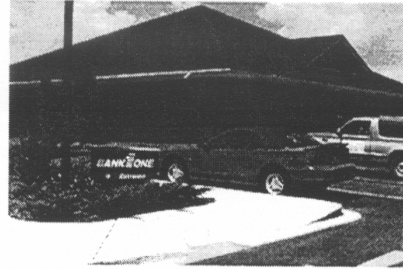
10.5 ALLOWABLE SIGN TYPES

Policy:

In general, the type of sign used should reinforce the urban environment of commercial developments. Signs should be designed as a "family", incorporating similar, compatible materials that reinforce the design and style of the project architecture. The following sign types should be considered within a project site.

Monument Signs:

Monument signs may be located at the street or primary entries to commercial developments to provide the overall project identity. Smaller scale monument signs, less than 20 s.f., may be located at primary entries to free-standing office buildings to provide individual business identifications and building addresses. Such signs should contain only the name or trademark of the business, building or building complex which it identifies and shall not contain change panels, advertising or names of individual tenants. Affix monument signs to the ground in a continuous connection and integrate monument signs into landforms or landscaping. For multiple user facilities such as shopping centers or office buildings, site ID signage requires additional variables that must be considered. Conceptual designs for signs serving these types of facilities must be submitted to the planning department.



SMALLER SCALE MONUMENT SIGNS MAY BE LOCATED AT PRIMARY ENTRIES TO PROVIDE INDIVIDUAL BUSINESS IDENTIFICATIONS AND ADDRESSES.

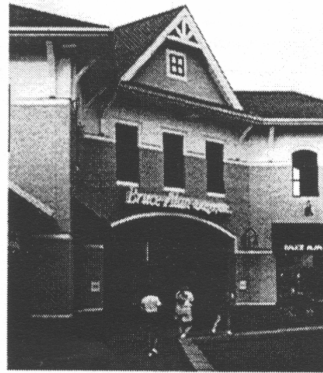


EMPLOY A CONSISTENT SIGN PATTERN



INCONSISTENT SIGN PATTERNS CREATE CONFUSION. SIGNS WITHIN OR ABOVE ROOF AREA ARE PROHIBITED

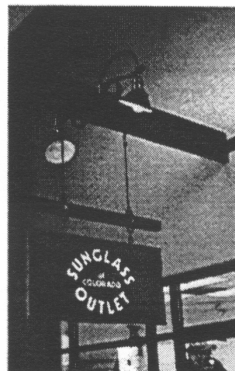
LOCATE FLUSH-MOUNTED SIGNS ON BUILDINGS AT THE FIRST FLOOR LEVEL ONLY FOR RETAIL AND AT THE SECOND LEVEL FOR OFFICES.



FLUSH-MOUNTED SIGN AT THE FIRST LEVEL



SIGNS THAT PROJECT FROM A BUILDING ARE FOR RETAIL USE ONLY.



PROJECTING SIGNS MAY NOT EXCEED 4 SQUARE FEET IN AREA.

Flush-mounted Signs on Buildings:

Locate flush-mounted signs on buildings at the first floor level only for retail uses and at the second floor level for office uses. Wall signs shall identify the individual business, building or building complex by name or trademark only. Flush-mounted signs may not project more than 8 inches from the face of the building.

Projecting Signs:

Signs that project perpendicular from a building are allowed for multi-tenant retail and office uses within a predominantly retail center only. Projecting signs may not exceed 4 square feet in area, must be mounted above 7 feet from grade and may not project more than 5 feet from the attached wall.

Pole-mounted Signs:

Pole-mounted signs are allowed only as traffic regulation signs providing appropriate directions to loading and receiving areas, visitor parking, and other special areas within each development site. These signs may not exceed 4 square feet in area and 6 feet in height measured from grade.

Flashing or Moving Signs:

Flashing or moving signs are not permitted.

11. EXTERIOR / SITE FURNISHINGS DESIGN STANDARDS

GOAL:

The purpose of the site furnishing guidelines is to provide a visually attractive and coordinated selection of trash receptacles, drinking fountains, bike racks, and tree-grates. These site furnishings are extremely important to the overall character and impression of the Gateway District.

11.1 REQUIRED SITE FURNISHINGS

Policy/Standard:

Major site furnishings include benches, waste receptacles, planters, railings and bollards. In general, visual continuity of these elements is desired throughout the District. All components of outdoor site furniture should be low maintenance and resistant to vandalism.

Outdoor Seating:

Design/select outdoor seating that is comfortable, attractive, durable and easy to maintain. Locate benches at major building entryways, drop-off areas, transit stops, pedestrian courtyards and plazas. Locate benches in areas that receive direct sunlight in the winter, are sheltered from the winds and shaded in the summer. Where seating is designed to be fixed, provide a variety of arrangements (both linear and grouped), which accommodate two (2) to six (6) persons

Planters and Waste Receptacles:

Design planters and waste receptacles to coordinate with other furniture. Use materials and colors similar to those used for benches.

Tree Grates:

Use tree grates to prevent excessive soil compaction and to give added interest to the pavement. Choose tree grates that are fabricated of a strong non-rusting steel, capable of supporting maintenance vehicles. In some areas which receive heavy use by people, tree guards

may be appropriate to give added protection to young trees.

Trash Dumpsters:

Locate trash dumpsters near building service entrances, easily accessible by trucks and away from predominantly public areas. Provide concrete pad, minimally 8 feet wide, to provide truck access to dumpster locations.

Whenever feasible, gang trash dumpsters in areas to be shared

by multiple buildings and users.

Enclose and landscape around all trash dumpsters.

Bicycle Racks:

Bicycle racks should be compatible with other site furnishings. These should be located in major activity areas within the Gateway District adjacent to walkways.

11.2 OPTIONAL SITE FURNISHINGS

Policy/Standard:

While the following site furnishings are not required in all public areas, it is important that an attractive and coordinated system of these amenities be provided.

Newspaper Vending Machines:

Group newspaper and other publication vending machines in pedestal-mounted racks. Select locations near activity centers and principal entry points to buildings. Screen side and rear panels with hedges or walls. Install pedestal or wall-mounted machines that project into circulation spaces no higher than twenty-seven inches (27") above floor level. Projections above this height are a hazard to white cane users.

12. ENVIRONMENTAL SENSITIVITY DESIGN STANDARDS

GOAL

Residents, workers, visitors and all types of users are attracted to the Broom field Gateway District area as a result of an exciting blend between economic vitality, quality of life, and natural beauty. Preservation of this proper blend, while inevitable changes occur, is the key to the ongoing future stability and quality of the Gateway District area.

Policy/Standard:

Each development should view environmentally sensitive design challenges as opportunities to create lasting value and real beauty by respecting the natural environment and creatively responding to it, rather than opposing it. Towards that end, the Gateway District seeks to achieve ecological development through sustainable design principles, and ongoing environmental programs and maintenance. The application of emerging eco-technologies and environmentally sensitive design will be an ongoing and evolving part of the development approval process within the Gateway District.

12.1 ENVIRONMENTALLY SENSITIVE DEVELOPMENT STANDARDS

Policy/Standard:

Each development will be required to demonstrate compliance with the intent of this section. All reasonable efforts will be required to apply latest technical understandings toward the preservation of sensitive natural features or natural systems, mitigation of development impacts to natural patterns, conservation of resources, optimization of the efficiency of systems, safe technologies, and recycling of valuable materials. Developers in the Gateway District will be expected to "take the lead" in the industry implementing and managing sustainable design concepts. Many eco-development programs do not cost more and may even save money in the initial stages.

12.2 SUSTAINABLE DESIGN CONCEPTS

Policy/Standard:

To the extent possible and practical each development shall comply with the following sustainable design concepts:

Integrate all development into the existing sites in an environmentally sensitive way, minimizing disturbance to the site and responding to the unique natural patterns (i.e. topography, drainage, wildlife, and vegetation). Plan site improvements to conserve resources and factor in local climate conditions.

Choose "renewable materials" to maximize durability, minimize waste and maintenance cost. Eliminate the use of toxic materials, and conserve resources throughout the full life-cycle, from raw material stages to the final product and replacement materials. Employ all reasonable energy and resource conservation practices including soil protection, water conservation, and energy efficient systems throughout. Pursue natural bio-filtration systems in drainageways to purify runoff. Omit all toxic emissions and pursue all avenues to reduce automobile traffic and thereby reduce air pollution. Pursue solar opportunities and daylighting concepts.

12.3 ONGOING ENVIRONMENTAL PROGRAMS AND MAINTENANCE

Policy/Standard:

A key aspect of environmental sensitivity design is the ongoing environmental programs and maintenance. Each development is encouraged to pursue all opportunities to promote car pooling, ride sharing, bus pass programs, and all other programs which reduce single-occupant vehicles. Energy conservation programs to educate and remind users to recycle and conserve resources

are important to meet the overall goals of the Gateway District. Ongoing maintenance of eco-

development concepts and programs is required to continue effective environmental sustainability.

13. CONSTRUCTION CRITERIA AND MAINTENANCE STANDARDS

GOAL:

The importance of proper construction implementation, site operations, as well as ongoing maintenance standards have a very significant impact on the surrounding property owners, users, public, and ongoing success of the Gateway District. Beyond the proper and creative design and planning of Development Improvements, it will be required for each development to demonstrate criteria and systems to protect the City, the public, and others during all phases of implementation of each project. The ongoing maintenance operations and management to continually portray a high quality image reflective of a premier Gateway District will be required.

13.1 CONSTRUCTION STAGING AND SITE MANAGEMENT

Policy/Standard:

Each developer will need to continually demonstrate clear plan to protect the City, public, and others during all operations and to fully coordinate schedules and impacts with adjacent owners, developers, contractors, tenants, and users. Each developer shall prepare and have available for review by the City an accurate and updated "Construction Site Logistics Plan" demonstrating: general schedule of project, siting of construction, staging areas, erosion control measures, vehicular access/servicing/deliveries, and construction parking controls (including mud

control devices). Pedestrian, bike, transit, and emergency access and circulation requirements and protection will all need to be addressed (submit with plans for building permits).

13.2 TEMPORARY STRUCTURES/FACILITIES

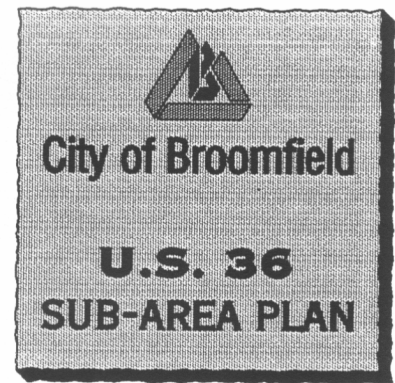
Policy/Standard:

In addition to all regulatory requirements, each development phase within the Gateway District will need to clearly demonstrate and receive City approvals for all temporary structures and facilities. The Construction Site Logistics Plan should show all temporary structures, trailers, lighting, signage, utilities, and key security measures (submit with plans for building permits).

13.3 POLLUTION CONTROLS

Policy:

The Construction Site Logistics Plan should clearly show mitigation controls to avoid all aspects of pollution throughout all phases of construction. Dust, noise, erosion, emulsions, debris, toxic chemicals, and all other forms of pollution. Regular and periodic clean up the site will be required to minimize the potential impact of construction on adjacent property, including visual nuisance (submit with plans for building permit).



MAY. 1997

7. TECHNICAL APPENDIX

THE FOLLOWING TECHNICAL APPENDIX SECTION CONTAINS INFORMATION GENERATED DURING THE SUB-AREA PLAN STUDY, OR OTHER REFERENCE MATERIALS, WHICH MAY BE USEFUL FOR FUTURE USERS, BUT THAT WAS NOT INCLUDED IN THE MAIN SUB-AREA FINAL REPORT.

IN GENERAL, THE TECHNICAL APPENDIX SECTION CONTAINS:

- SOURCE DOCUMENT REFERENCE LIST
- JURISDICTIONAL BOUNDARIES MAP (EXISTING)
- TRANSPORTATION SYSTEM ALTERNATIVE CONCEPTS AND STUDIES
- U.S. 36/96TH MIXED-USE SUBDISTRICT CONCEPT 3C ALTERNATIVE

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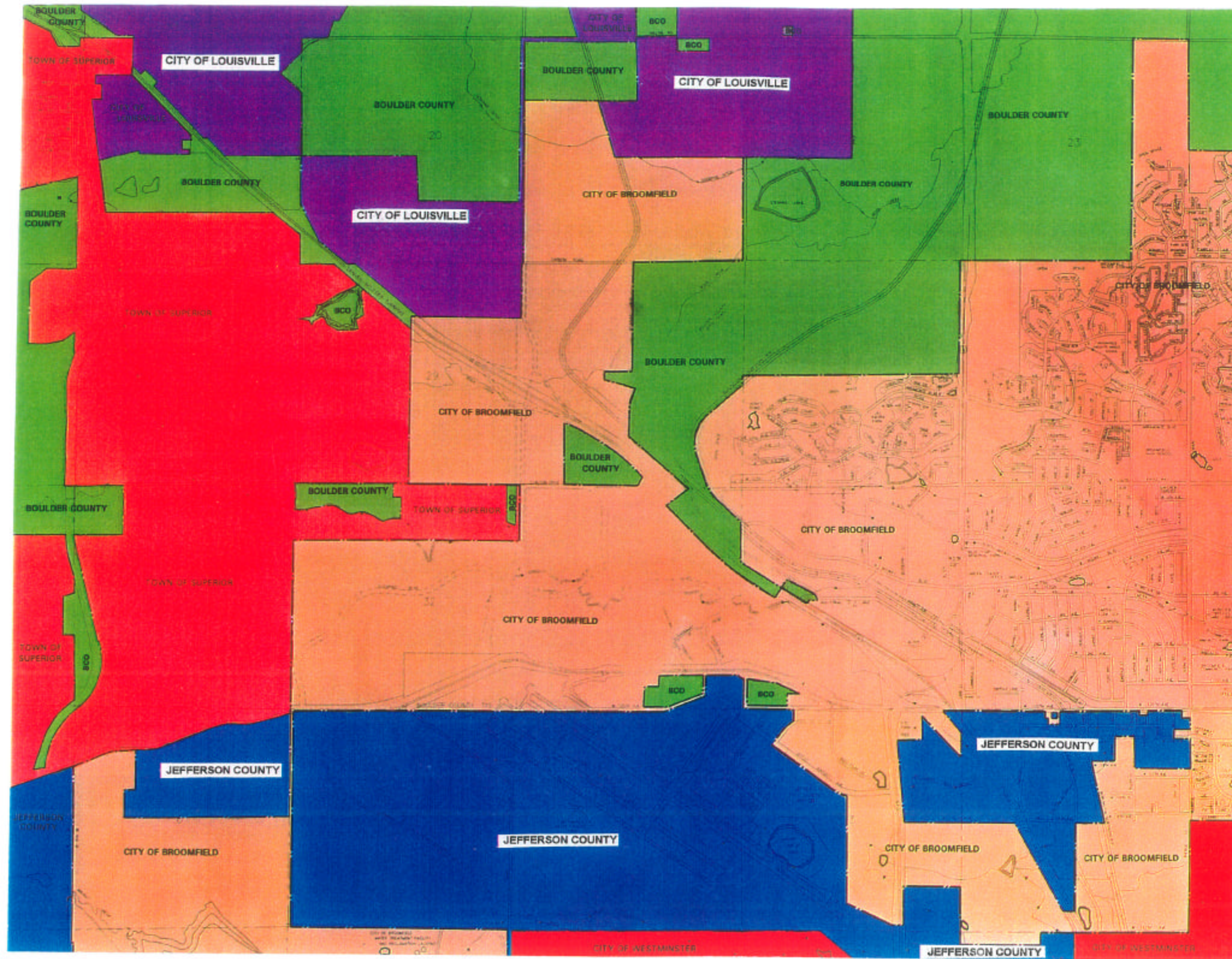
SOURCE DOCUMENTS

OVER 20 PREVIOUS AREA PLANNING INFLUENCE MAPS AND OTHER CURRENT PLANNING DOCUMENTS WERE USED AS RESOURCES AND REFERENCES DURING THE SUB-AREA STUDY:

1. JEFFCO AIRPORT PLANNING INFLUENCES AND MASTER PLAN
2. EXISTING BROOMFIELD ZONING
3. BROOMFIELD MASTER PLAN (CALTHORPE)
4. BROOMFIELD WILDLIFE AND OPEN SPACE STUDY
5. INTERLOCKEN GENERAL DEVELOPMENT PLAN
6. STORAGETEK MASTER SITE DEVELOPMENT PLAN
7. CITY OF WESTMINSTER COMPREHENSIVE PLAN
8. CITY OF LOUISVILLE COMPREHENSIVE PLAN
9. BOULDER COUNTY COMPREHENSIVE PLAN
10. WESTCOR PARTNERS DEVELOPMENT PLANS FOR NORTHWEST CORNER OF COALTON ROAD AND 96TH STREET
11. NORTHWEST PARKWAY PLAN/IGA
12. ROCK CREEK/SLMPSON HOUSING MASTER PLAN
13. RTD PARKING LOT EXPANSION PLANS
14. INTERCHANGE INFLUENCE AREA PLAN (96TH AT U.S. 36, ORDINANCE #907)
15. MID CITIES LAND USE PLAN
16. BROOMFIELD GATEWAY VISION PLAN
17. 96TH INTERCHANGE / NORTHWEST PARKWAY GATEWAY PLAN
18. U.S. 36 CORRIDOR IMAGE STUDY
19. BALL CORPORATION MASTER PLAN @ JEFFCO AIRPORT
20. MIDLAND CORPORATION MASTER PLAN FOR R. WHITE PROPERTY
21. OTHER SIMILAR PLANNING STUDIES FOR PRIVATE OR PUBLIC LAND, AS PROVIDED.

JURISDICTIONAL BOUNDARIES

THE FOLLOWING PLAN SHOWS THE CURRENT "JURISDICTIONAL BOUNDARIES MAP" INCLUDING CITY OF BROOMFIELD, TOWN OF SUPERIOR, CITY OF LOUISVILLE, CITY OF WESTMINSTER AS WELL AS AREAS OF UNINCORPORATED BOULDER COUNTY OR JEFFERSON COUNTY.



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TRANSIT SYSTEMS PLANNING
303-449-1903



City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**JURISDICTIONAL
BOUNDARIES
PLAN**



FEET
0 400 800 1600 3200

DATE: 4/22/97

**BROOMFIELD/US-36 SUBAREA
TRANSPORTATION STUDY**

TRAFFIC ANALYSIS APPENDIX

Prepared for:

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Prepared by:

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FHU Reference No. 96-208
April, 1997

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1.0 INTRODUCTION

The southeast corner of Boulder County is currently one of the most dynamic markets for development in the Denver metropolitan area. The Broomfield / US-36 Subarea Study encompasses much of this area, and the primary study area (Figure 1) is bounded by US-287/SH-121 on the east, Dillon Road on the north, McCaslin Boulevard on the west, and Jeffco Airport/SH-128 on the south. Because of several recent major developments which are being planned in the study area, the City of Broomfield determined that a closely coordinated land use and transportation planning effort should be undertaken. There are a number of questions about the roadway system which will be most appropriate to serve this area, and only through a comprehensive planning effort could these answers be determined. The transportation element of the study involved an in-depth analysis of alternative modes in addition to an assessment of the significant roadway issues. Transit and other alternatives to the automobile are discussed in more detail in the final report.

Much of the transportation planning efforts focused on US-36 because of its importance in providing regional access. US-36 and the

Burlington Northern - Santa Fe Railroad tracks also form a barrier between much of the current and future commercial in the City and the residential areas in Broomfield. There are only three interchanges in the Broomfield/Louisville area which allow crossing of US-36, and the 96th Street interchange was only recently completed. It is also crucial that alternatives to US-36 be developed in the future so that a diversity of access is provided to the study area.

This Traffic Analysis Appendix provides the background information about the process which was followed in developing the recommended roadway configuration for the study area. During the study, there were a number of meetings with City of Broomfield staff and three general meetings to share information with all property owners in the study area. Through these meetings, several basic documents which provide guidance for the transportation system element of the study were developed. These included goals which the transportation system should strive to achieve (Section 2.0), the constraints and needs that the planning efforts for the transportation system should address (Section 3.0), and evaluation criteria for assessing specific improvement alternatives (Section 4.0).

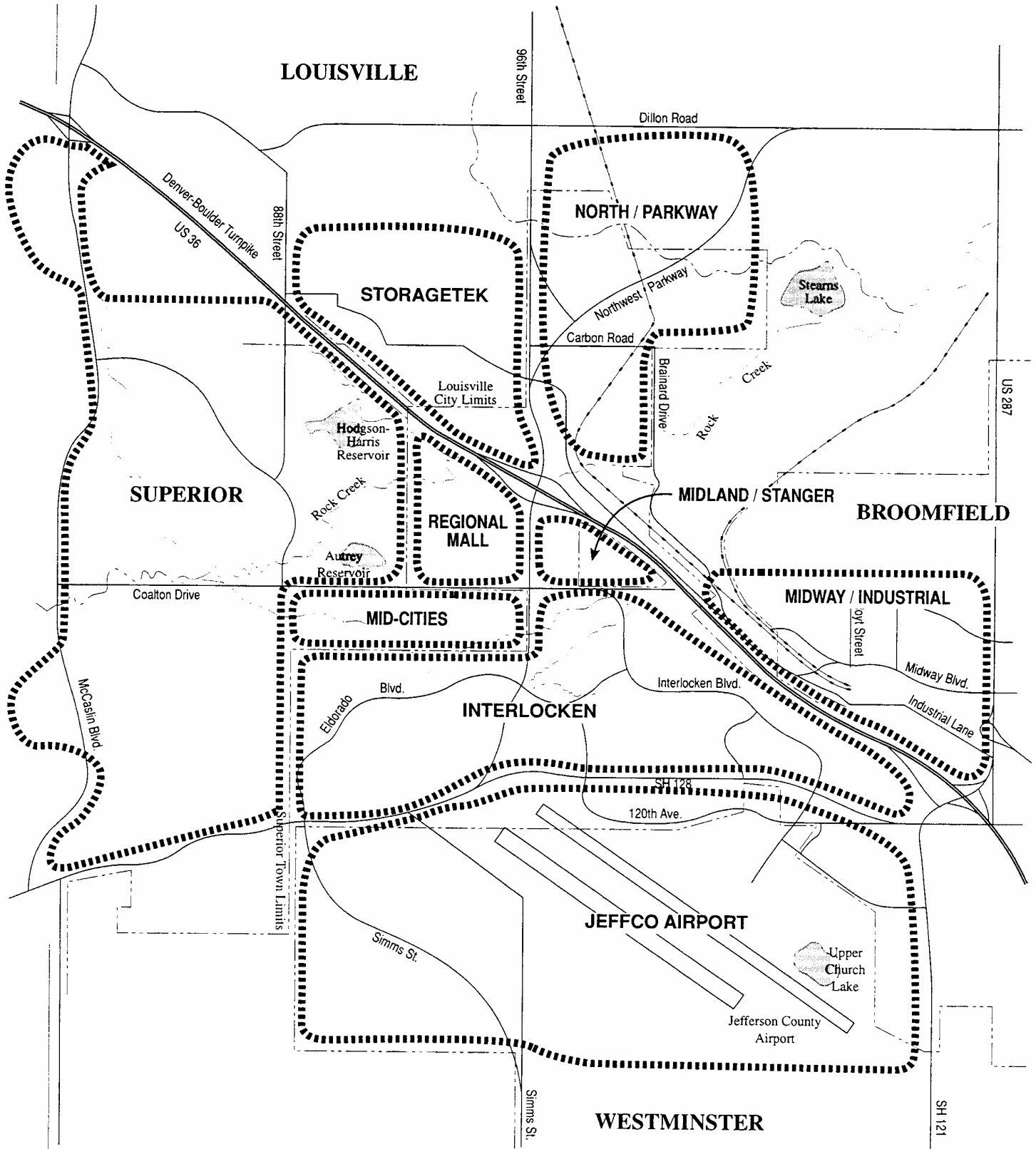


Figure 1
Study Area (with Primary Sub-Areas)

2.0 TRANSPORTATION SYSTEM GOALS

- Develop a comprehensive, multi-modal transportation system which addresses the access and circulation needs of the subarea and surrounding communities.
 - Because significant improvements to the US-36 corridor are not likely in the near-term, there should be other alternatives which provide regional and local access to the subarea.
 - Opportunities for improved bus transit service should be maximized in the near-term and provisions made to preserve long-range options for more capital intensive transit service (i.e. park-n-Ride lots, Bus/HOV lanes, light-rail transit, commuter rail, etc.). Both US-36 and Northwest Parkway are planned to be multi-modal corridors.
 - Pedestrian and bicycle connections should be provided to link Broomfield and other nearby communities with development in the subarea.
 - Transportation system improvements should coincide with (or anticipate, if possible) land use changes.
- The transportation system should reduce barriers which divide Broomfield and the subarea (US-36 and Burlington Northern Railroad tracks).
- Transportation system improvements should be planned and laid-out to minimize disruption to existing development, both residential and commercial.
- Travel reduction measures should be considered as a key element in developing an adequate transportation system.
- There should be maximum efforts to work with outside agencies to focus regional resources to make improvements along the corridor.

3.0 TRANSPORTATION SYSTEM CONSTRAINTS/NEEDS

- There shouldn't be a Midway Boulevard crossing of US-36
- There should be a Midway Boulevard / Industrial Lane connection
- There shouldn't be any roads through the Interlocken golf course
- There shouldn't be any public roads through StorageTek (for security reasons) - Their master plan provides for a ring road system
- There shouldn't be any significant encroachment on open space, either Boulder County or Broomfield
- There shouldn't be any new public roads that interfere with Jefferson County Airport's airside (runways and operations).
- There shouldn't be public road connections through Lac Amora to the west or north
- The master plan for Interlocken should be respected - 6 access locations have been planned as part of the PUD

4.0 EVALUATION CRITERIA FOR TRANSPORTATION SYSTEM ALTERNATIVES

- Comply with Subarea study goals and constraints/needs
- Disperse transportation needs/activities
- Preserve functional capabilities/utility of existing/recently constructed facilities
- Recognize and coordinate with approved Comprehensive Plans, Master Plans, and PUD's
 - Broomfield, Louisville, and Boulder County
 - Interlocken and StorageTek

- Northwest Parkway Intergovernmental Agreement and US-36 Corridor Study
- DRCOG 2015 and 2020 RTF
- Minimize congestion problems
- Maintain system capacity through access control principles and other measures
- Minimize improvement costs
- Provide opportunities and/or preserve potential for multi-modal transportation
- Improve accessibility to lands planned for development
- Ease coordination and approval processes and recognize jurisdictional boundaries with other agencies/jurisdictions.

5.0 INITIAL INTERCHANGE CONFIGURATIONS

Approximately a dozen concepts showing potential interchange layouts, overpasses, and one-way frontage road systems were presented to the Property Owners at a meeting on December 18, 1996. Based on the discussions at that meeting and subsequent to it and refinement of the list of constraints (Section 3.0), five of the most feasible interchange configurations along US-36 were developed, evaluated, and presented to the Property Owners on January 22, 1997.

The advantages and disadvantages, estimated construction costs and relative capacities are given in the following sections. The relative capacity is based on the capacity of a diamond interchange (such as the new 96th Street interchange) having a value of 1.0.

Based on a determination of relative costs, capacities, and distribution of access to the various subarea properties, it was determined that the braided ramp and directional interchange

configuration provide the most advantages and were refined (see Section 7.0). The partial cloverleaf improves the capacity of the existing diamond interchange at 96th Street and was included as a potential future capacity improvement for the directional interchange configuration.

5.1 Braided Ramps (Figure 2)

Advantages:

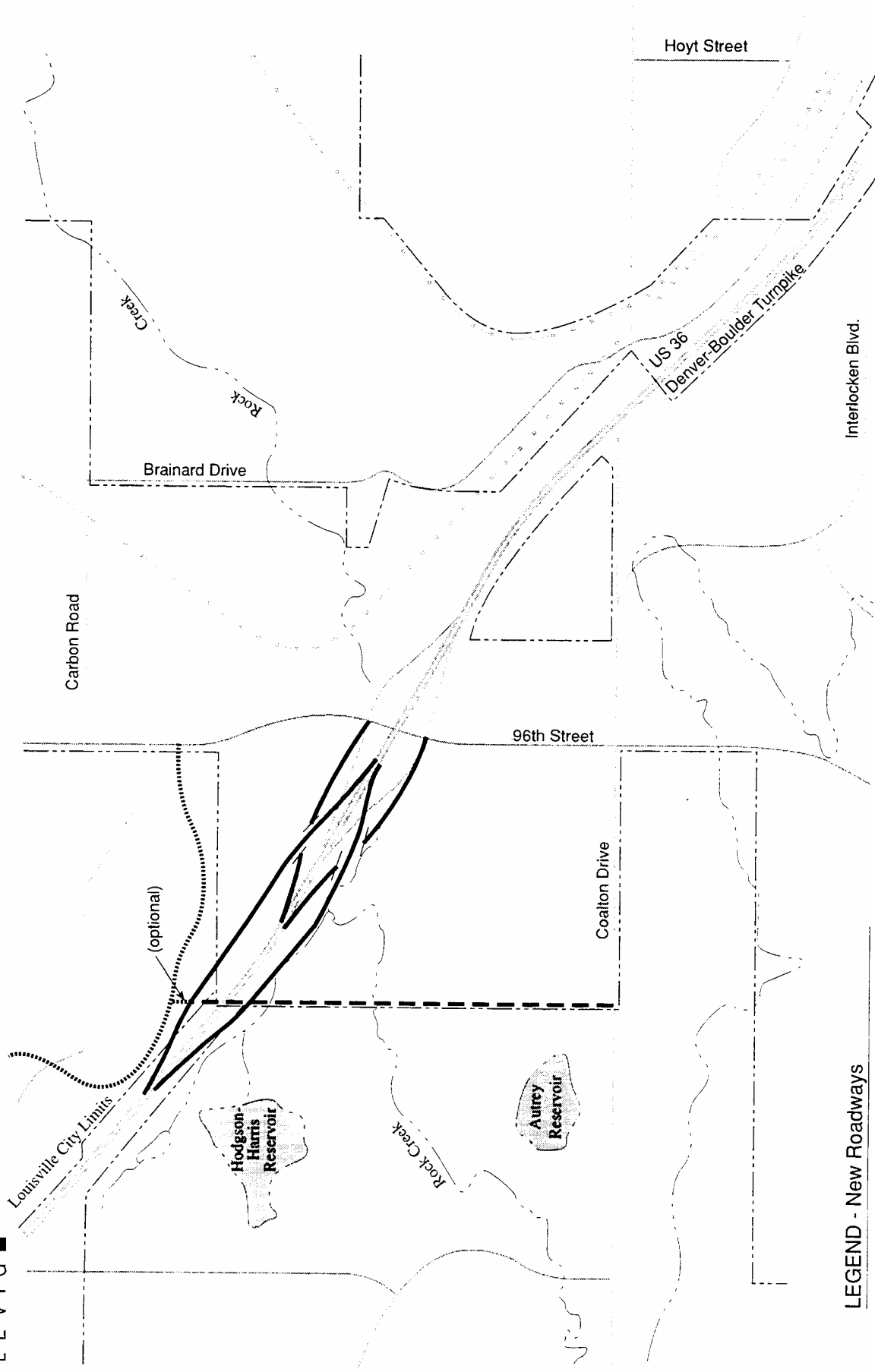
- Provides alternative north/south arterial parallel to 96th Street (on 92nd Street alignment).
- 2 local arterials access US 36
- Could have direct access to StorageTek
- Doesn't affect Interlocken PUD
- New interchange could be shifted east to avoid land in Louisville and Superior.

Disadvantages:

- Most expensive - 3 new bridges required
- Approval process may be more difficult because of two closely spaced interchanges.
- Would need careful signing.
- Might require ROW from StorageTek.
- Couldn't reconstruct 96th Street with a partial cloverleaf configuration.

Construction Cost: \$10 - \$12 Million (Not Including ROW)

Relative Capacity: 2.0



LEGEND - New Roadways

- = Ramps
- - - = Arterial
- = Private Road

Figure 2
Braided Ramps

5.2 Directional Interchanges (Figure 3)

Advantages:

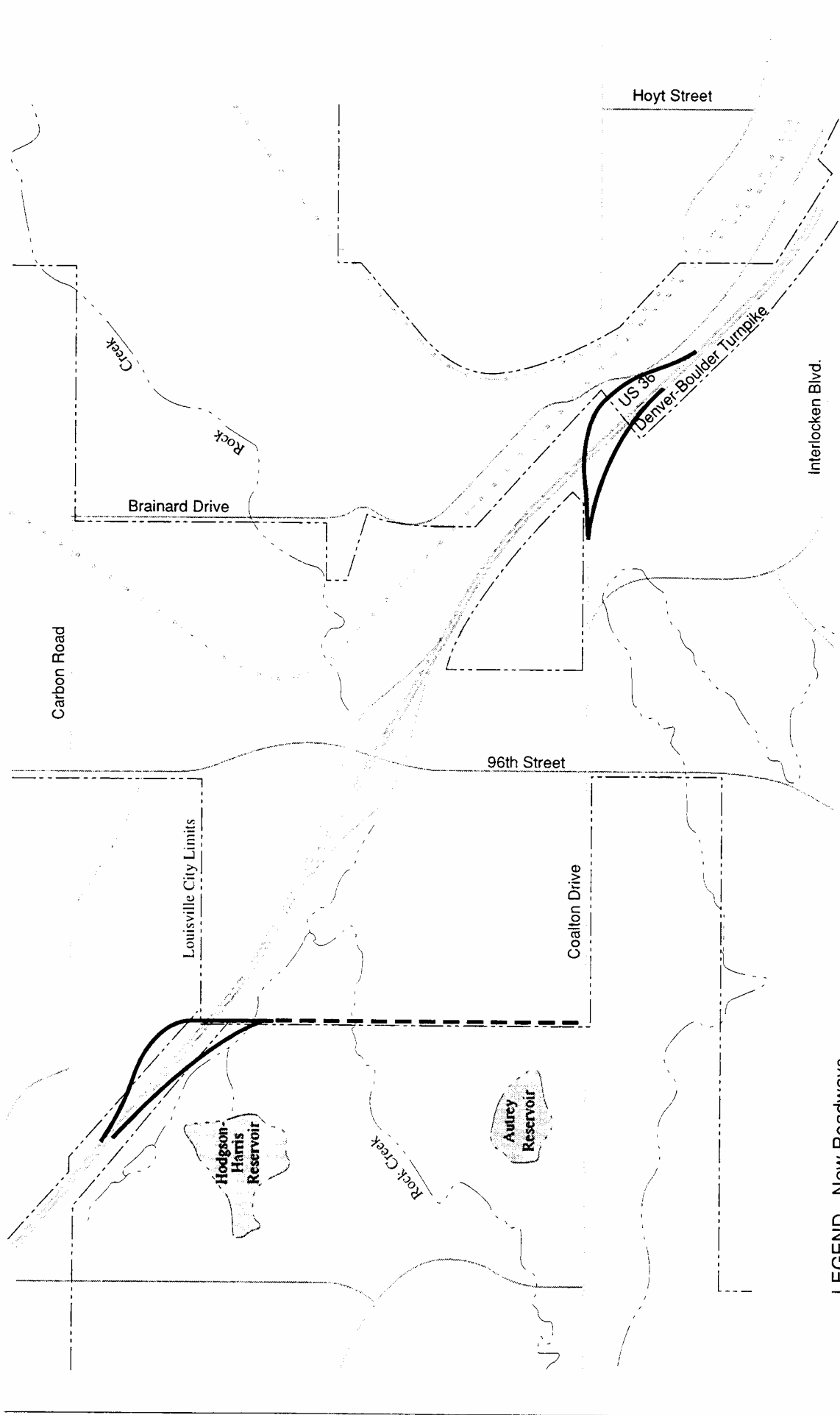
- Separates traffic from 96th Street / Northwest Parkway.
- Minimizes VMT - direct paths are provided to major users from both Denver & Boulder ends of US 36.
- Best distribution of traffic.
- 3 roads are used for access - 92nd, 96th and Coalton/Interlocken.
- Approval process would be easier than the others because of precedents from other interchanges in Colorado and the separation to the new ramps are adequate.
- Would work with partial cloverleaf at 96th Street.

Disadvantages:

- Changes geometry and intended use of Interlocken Blvd.
- Potentially restricted ROW along Industrial Lane and StorageTek.
- East fly-over bridge would modify views along US 36 - looking east to Interlocken and west to mountains.
- More expensive - two new bridges.
- West ramps are in Louisville/Superior.

Construction Cost: \$6 - \$7 Million (Not Including ROW)

Relative Capacity: 2.2



LEGEND - New Roadways

- = Ramps
- - - = Arterial

Figure 3
Directional Interchanges



5.3 Collector/Distributor Road System (Figure 4)

Advantages:

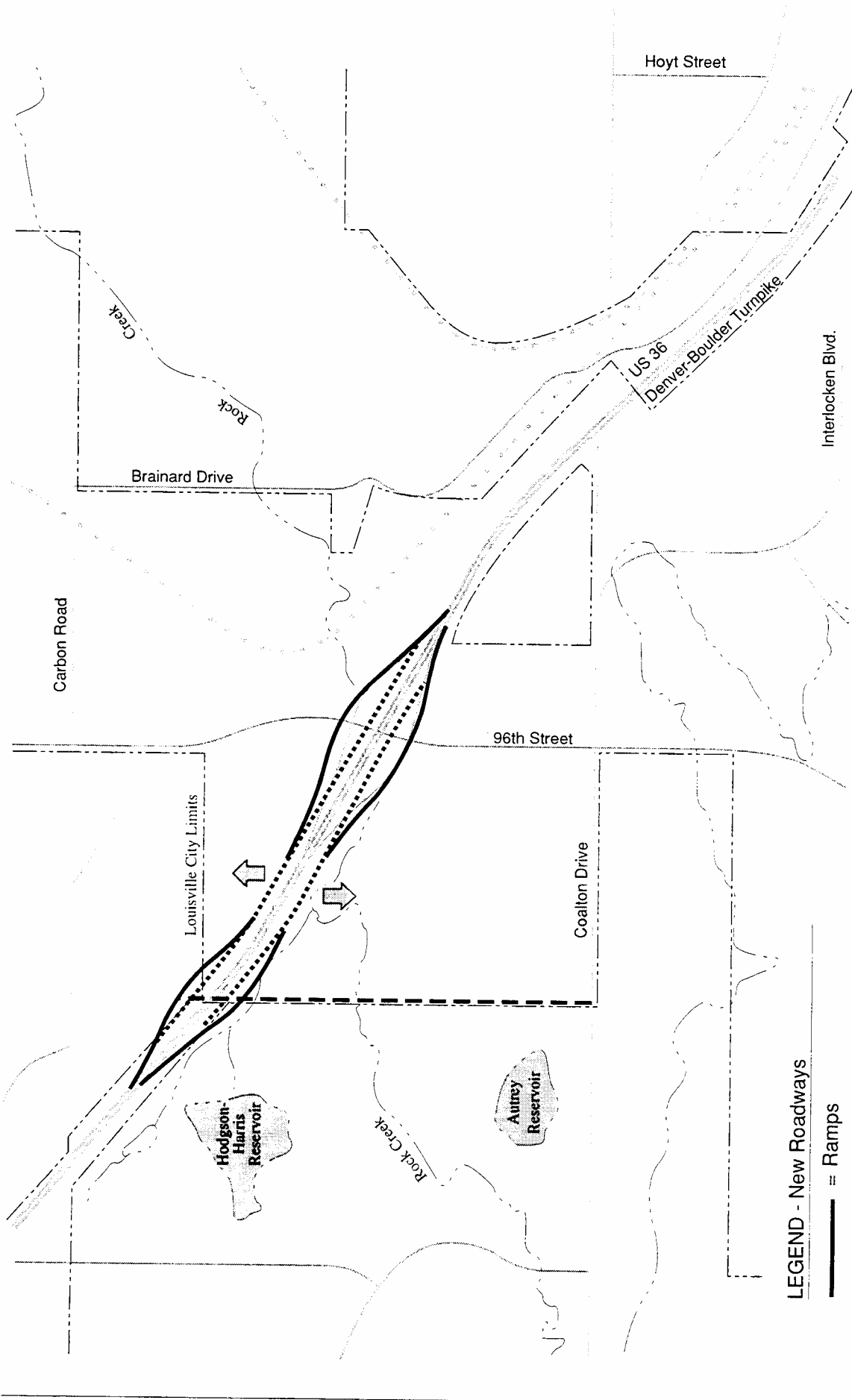
- Should be easier to sign on US 36 - only one exit point in each direction.
- May be able to get access to adjacent properties between 92nd and 96th Streets.
- Could have direct access to StorageTek.
- Disperses traffic to 92nd Street - parallel road to 96th Street (2 local arterials utilized). However, access to 92nd Street is relatively distant (to and from the east on US 36).
- Doesn't affect Interlocken PUD.
- New bridge could be shifted east out of Louisville/Superior (which would sacrifice some local access).
- Less expensive than other alternatives - only 1 new bridge required.

Disadvantages:

- Exit/entry movements concentrated at one location Probably would need 2 lane exits.
- Approval process may be the most difficult - particularly if access to collector/ distributor roads is being requested.
- West ramps are in Louisville/Superior.
- Facing on 96th Street bridge would need to be replaced to allow clearance for C-D road.
- Could do a partial cloverleaf with C-D roads, but very high volumes at entry/exit points.

Construction Cost: \$9 - \$10 Million (Not Including ROW)

Relative Capacity: 1.7



LEGEND - New Roadways

- = Ramps
- - - = Arterial
- · · = Collector-Distributor Road
- ↔ = Local Access



North

Figure 4
Collector-Distributor Roads

5.4 Separated Collector/Distributor Road on South Side (Figure 5)

Advantages:

- Disperses traffic to 92nd Street - parallel road to 96th Street (2 local arterials utilized). However, access to 92nd Street is relatively distant (to and from the east on US 36).
- Could provide direct access to mall from West/Boulder.

Disadvantages:

- Moderately expensive - two new bridges required.
- Would be most difficult to get through CDOT approval process because of separate ramp providing direct access to private property.
- All westbound traffic would use one ramp to get onto US 36.
- West ramps in Louisville/Superior - hard to move east and still give local access.
- Difficult to sign and keep local access.
- Very difficult to reconstruct 96th Street as partial cloverleaf.

Construction Cost: \$8 - \$9 Million (Not Including ROW)

Relative Capacity: 1.5

5.5 Partial Cloverleaf (Figure 6)

Advantages:

- Lowest cost alternative to increase capacity to/from US-36

Disadvantages:

- Would operate the best in conjunction with the Directional Interchanges alternative because it would supplement the overall capacity. By itself it would concentrate traffic along 96th Street.

Construction Cost: \$2 - \$3 Million (Not Including ROW)

Relative Capacity: 1.4

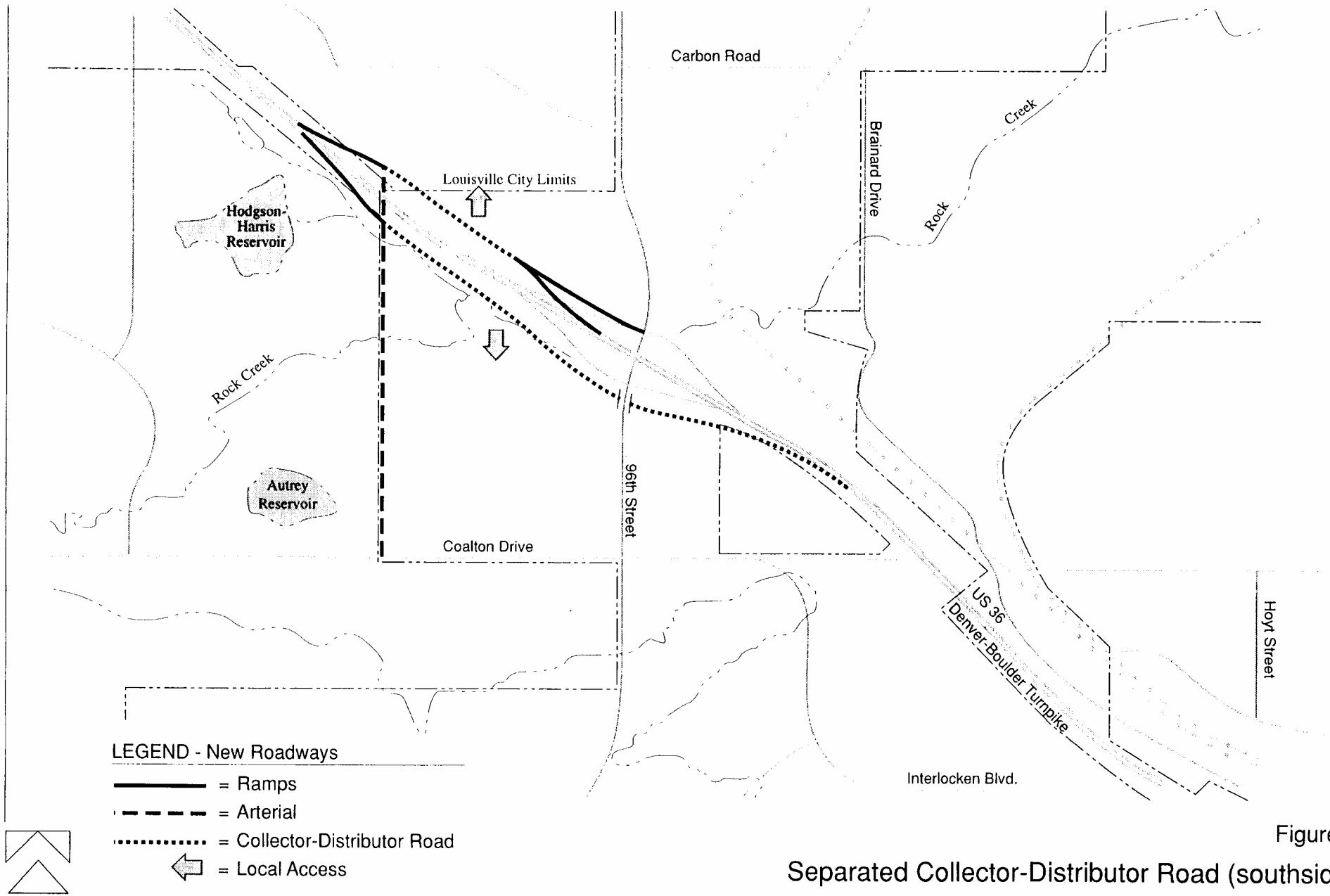
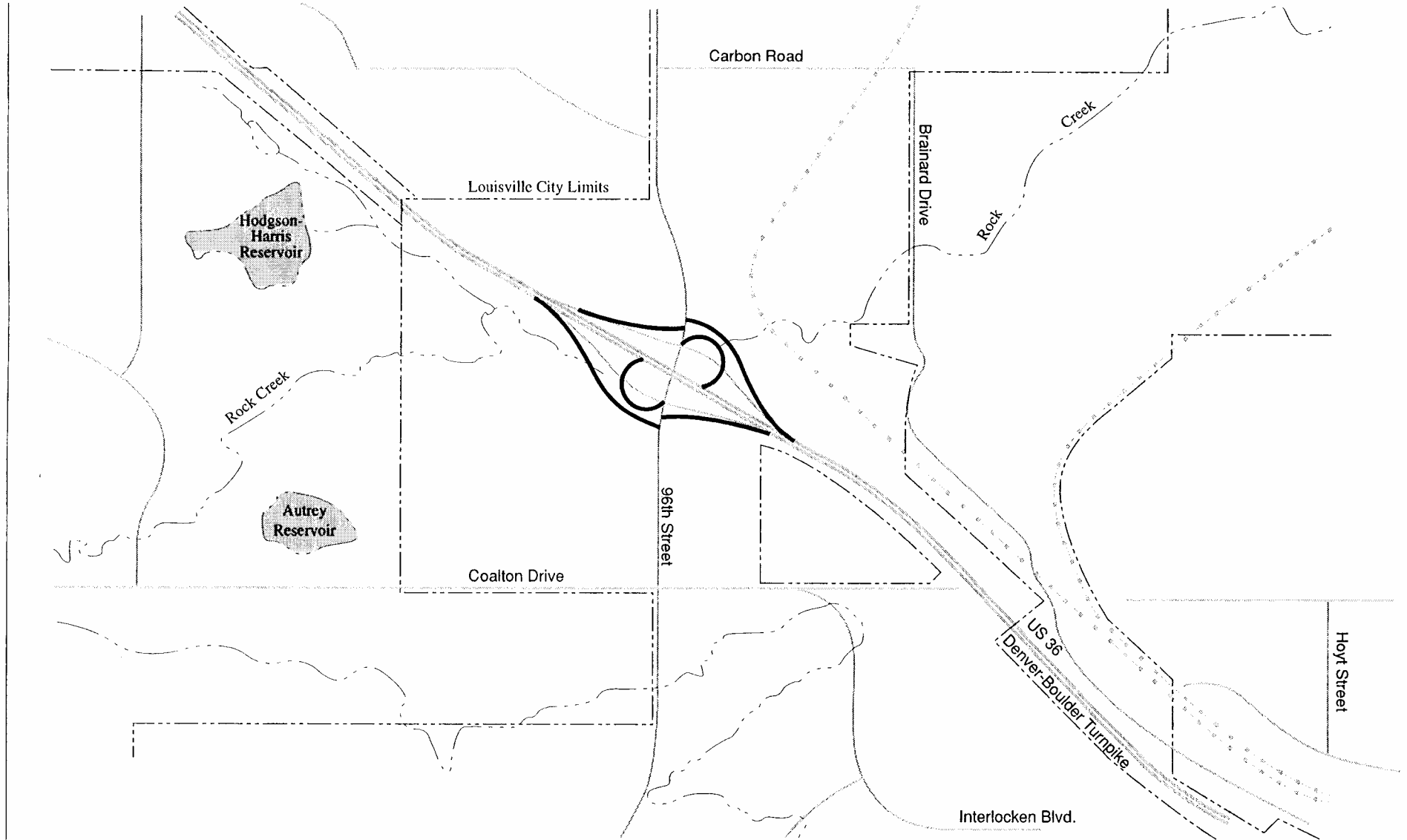
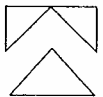


Figure 5
Separated Collector-Distributor Road (southside)



LEGEND - New Roadways

— = Ramps



North

Figure 6
Partial Cloverleaf

6.0 2020/BUILDOUT TRAFFIC FORECASTS

An analysis of the potential traffic which might be generated within the study area was undertaken to determine the level of daily traffic which might use each of the alternative roadway networks in the future. The land use consultant for the project (Downing Thorpe James) reviewed approved and potential development plans for parcels within the study area and prepared a matrix of the parcel sizes (in acres), proposed uses, potential building floor area, and potential employment for the study area. This information was summarized into the nine major subareas (see Figure 1) used for the study and is shown in Table 1. Trip generation forecasts were developed for the different land uses being proposed within each subarea using the Institute of Transportation Engineers' Trip Generation, 5th Edition, 1991. Total daily trip generation estimates are also given in Table 1 and shown graphically in Figure 7. Several of these trip estimates were obtained from previous studies which assessed individual development proposals in more detail than was possible for this study. These sources are also listed in Table 1.

The second step in developing traffic forecasts was to determine the directional distribution of the trips that are generated within the study area. Figure 8 shows the overall distribution of traffic from the study area to the rest of the Denver-Boulder area. Again, where more detailed distribution information was available from previous studies, these data were used for the individual subareas. The final step was to assign traffic to the alternative networks so that comparisons of the likely traffic volumes which may need to be accommodated could be determined. These volume forecasts are included

in the next section (Section 7.0) for each of the alternative roadway networks.

7.0 REFINED INTERCHANGE ALTERNATIVES

The initial interchange configurations were narrowed to two basic concepts for refinement: directional and braided ramp interchanges. As discussed in the following sections, several variations were explored for each of these concepts.

7.1 Alternatives 1 & 2 - Directional Interchange Concepts

The basic premise for the directional interchange is to use the 92nd Street alignment on the west side of the proposed Regional Mall and an extension of Interlocken Boulevard/Coalton Drive to provide directional ramps onto and off of US-36. Ramps to and from the west would be provided at 92nd Street, which is approximately 0.6 miles west of 96th Street. Ramps to and from the east would be provided along the general alignment of Interlocken Boulevard/Coalton Drive which is approximately 0.75 miles east of 96th Street. As mentioned previously, this configuration allows for the future reconstruction of the existing diamond interchange at 96th Street into a partial cloverleaf. It is not certain when (or if) this higher capacity interchange improvement will be necessary. It was included in these planning efforts so that an appropriate space envelope is preserved, and this opportunity is not precluded by future development.

Land Use and Trip Generation Summary

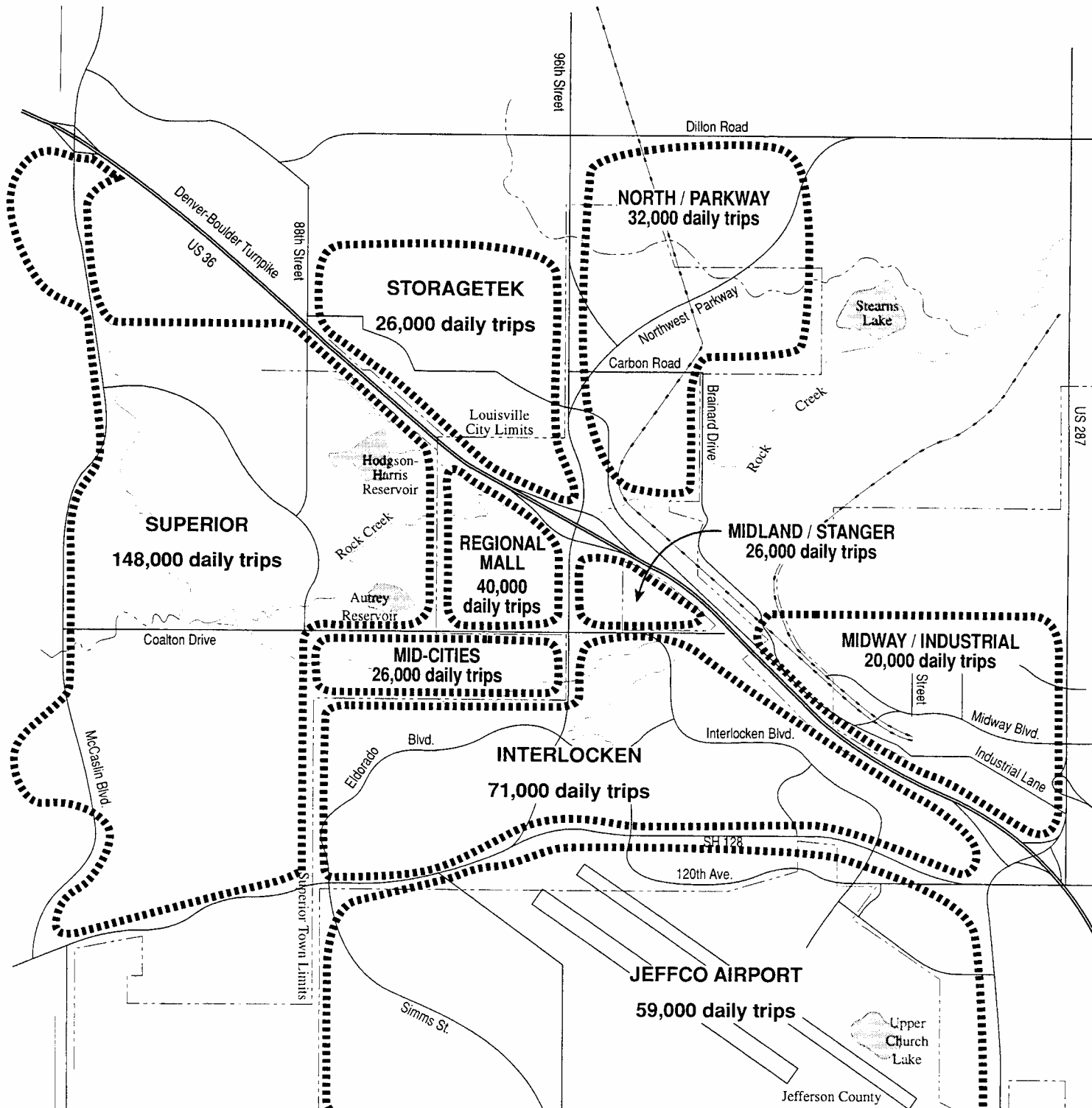
Area	Land Use(s)	Size (acres)	Proposed Development			Total Daily Trips
			Floor Area (sq.ft.)	Employment	Residences (units)	
Interlocken	Employment & Other Residential	497 20	7,600,000	17,000	340	71,000 (1)
Regional Mall	Commercial	121	1,318,000	6,600		40,000
Midway Blvd / Industrial Lane Area	Light Industrial / Employment	266	2,665,000	6,700		20,000
Midland /Stanger	Transit/ Commercial	73	754,000	3,800		26,000
Mid-Cities	Commercial Residential	65 61	651,000	3,300	297	26,000
North/Parkway	Employment/Mixed Use	365	3,182,000	8,400		32,200
Jefferson County Airport	Commercial Aviation/ Employment	13 616	113,000 5,367,000	570 21,500		59,000
StorageTek	Employment	223	2,234,000	7,000		26,000 (2)
Rock Creek/ Superior	See (3)					148,000 (3)

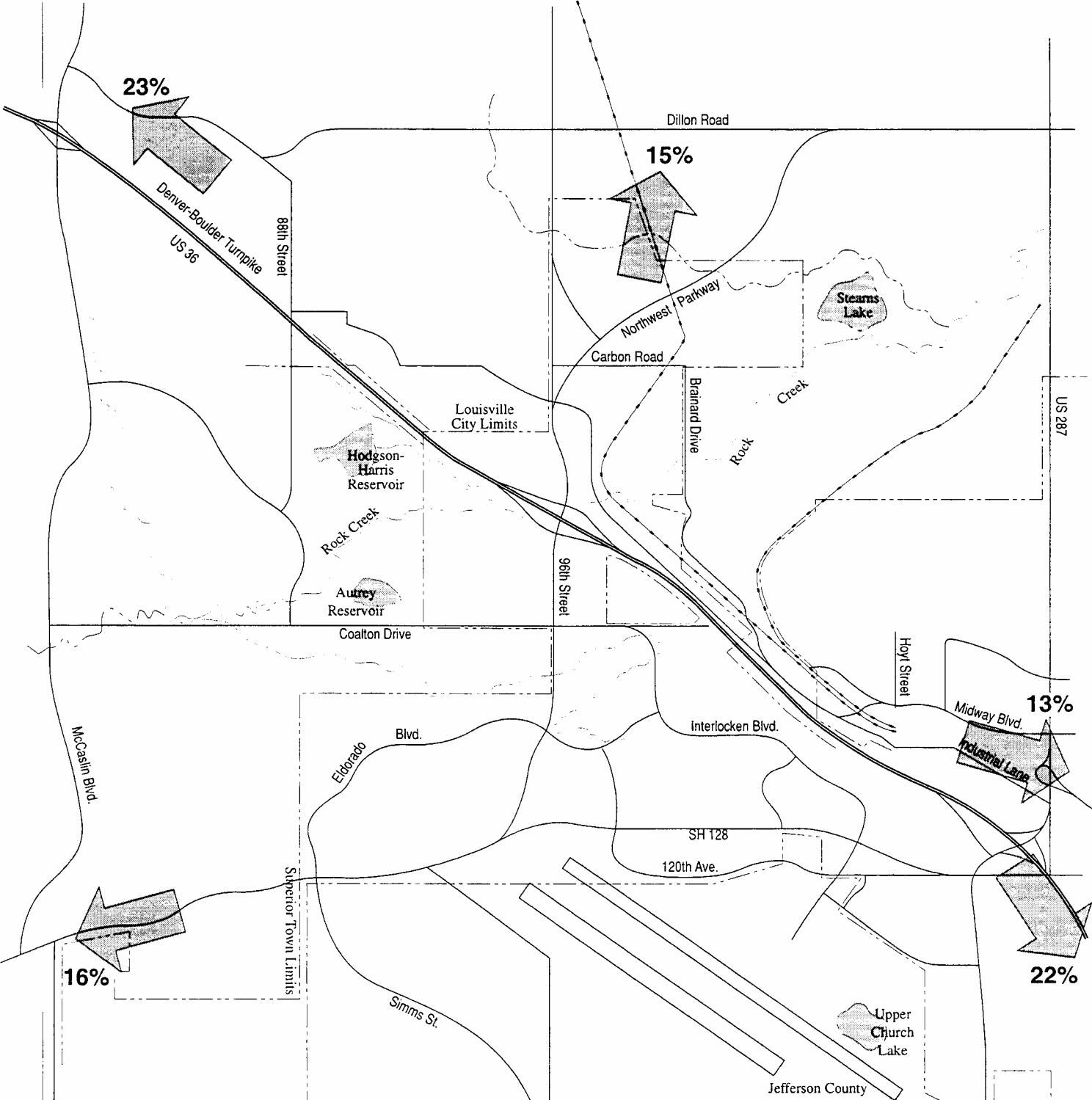
References

(1) "Interlocken Transportation Study, Travel Forecasts and Roadway System Analysis" (draft), Carter Burgess, April 1997.

(2) "STK Louisville Traffic", Leigh, Scott & Cleary, Inc., May 1992.

(3) "St. Louis County Traffic Study", St. Louis County, Missouri, 1992.





A major concern with the directional interchange concept as originally envisioned (see Figure 3) is that a large volume of traffic to and from Superior is forecasted to use Coalton Drive. In addition, the primary access to Interlocken area will be on 96th Street. There is the potential need to accommodate more turning traffic at the intersection of these two arterials than can normally be handled by an at-grade intersection. Thus Alternatives 1 and 2 evolved to address these concerns. Alternative 1 utilizes Interlocken Boulevard for the connection to the east directional ramps, while Alternative 2 separates Coalton Drive from Interlocken Boulevard and provides a separate connection to the east directional ramps. This also allows more direct connections to the Regional Mall and properties to the east and south of it. Subsequently, Alternative 2 was further refined to show two treatments for the connection between the new relocation of Coalton Drive and 96th Street. Advantages and disadvantages of the directional interchange are presented first and then specific attributes of the specific alternatives are presented.

Advantages of Directional Interchange Configuration:

- Distributes traffic onto 3 roads to get access to the area - 92nd, 96th and Interlocken/Coalton.
- New roadways meet driver expectancy - 92nd (to/from Boulder) and Interlocken/Coalton (to/from Denver area) line up well with the ramps they serve

- Reduces traffic on 96th Street / Northwest Parkway.
- Minimizes VMT - direct paths are provided to major users from both Denver & Boulder ends of US-36.
- Allows existing diamond interchange at US-36/96th Street to be expanded to partial cloverleaf in the future.
- Least expensive cost for new US-36 ramps.
- Approval process would be easier than the others because of precedents from other interchanges in Colorado and the separation to the new ramps are adequate.
- Lends itself very well to phased implementation.

Disadvantages of Directional Interchange Configuration:

- Brings Superior traffic through subarea on Interlocken/Coalton to get to US-36 to the east.

Basic Cost of Directional Interchange: \$6 - \$7 Million (not including ROW and Landscaping)

7.1.1 Alternative 1 - Directional Interchange using existing Coalton Drive (Figure 9)

Alternative 1 is a refinement of the original concept for the directional interchange shown in Figure 3. The east ramps have been shifted north in the vicinity of US-36 to minimize disruption to the hotel planned for this northeast corner of Interlocken (see Figure 9). Access from 96th Street to adjacent properties between US-36 and Interlocken Boulevard/Coalton Drive would be provided via a partial cloverleaf interchange. These properties include the Regional Mall to the west and commercial properties and the transportation center on the east side of 96th Street. Topography is such that the connecting road would need to go over 96th Street. From an aesthetic standpoint, this may not be desirable since it could create a "visual barrier" along the entrance to both Interlocken and the Regional Mall. This interchange has been located to optimize the utilization of the relatively short distance between US-36 and Interlocken Boulevard/Coalton Drive. Traffic operations require adequate room for proper weaving and storage of turning vehicles. The cross street will connect the Regional Mall with the transportation center. An exit ramp from the directional ramp can probably also be provided for inbound traffic from northwest bound US-36 to the Mall.

Figure 9 shows a number of potential access points to the Regional Mall and to the properties east of 96th Street. The mall could have access on the west side (new 92nd Street), south side (Coalton Drive), from the partial cloverleaf interchange on 96th Street (south of US-36), and from the connector road from the east at the new

directional interchange. Access to the properties on the east side of 96th Street would be from the south (Interlocken Boulevard) and the interchange and connector road.

Advantages:

- New interchange would specifically serve the Regional Mall, Midland/Stanger, and Transportation Center without disruption from non-site traffic (Superior traffic on Coalton)
- Helps reduce traffic congestion at 96th & Interlocken/Coalton by letting Superior traffic go straight through the intersection instead of turning left, but other alternatives relocate this volume entirely.

Disadvantages:

- Intersection of 96th & Interlocken/Coalton will be heavily congested by forecasted volumes. Ultimately, may require a grade separation.
- Changes geometry and intended use of Interlocken Blvd.

Costs: (not including ROW and Landscaping)

Alternative 1 Specific

Improvements: \$5 - \$6 Million
(in addition to cost of
directional interchange)

Potential Total Costs: \$11-13 Million

Traffic Forecasts: See Figure 10

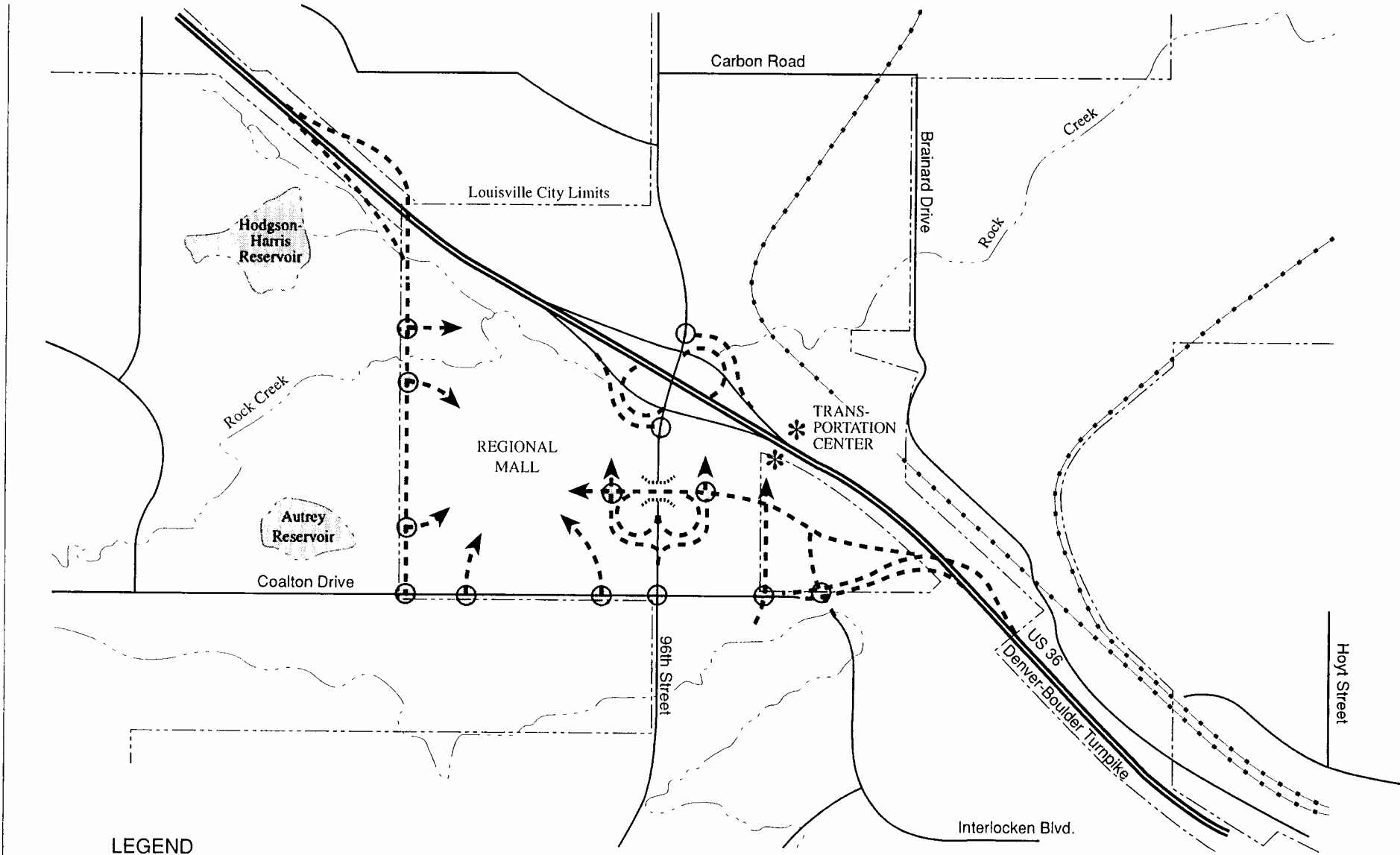


Figure 9
Alternative 1

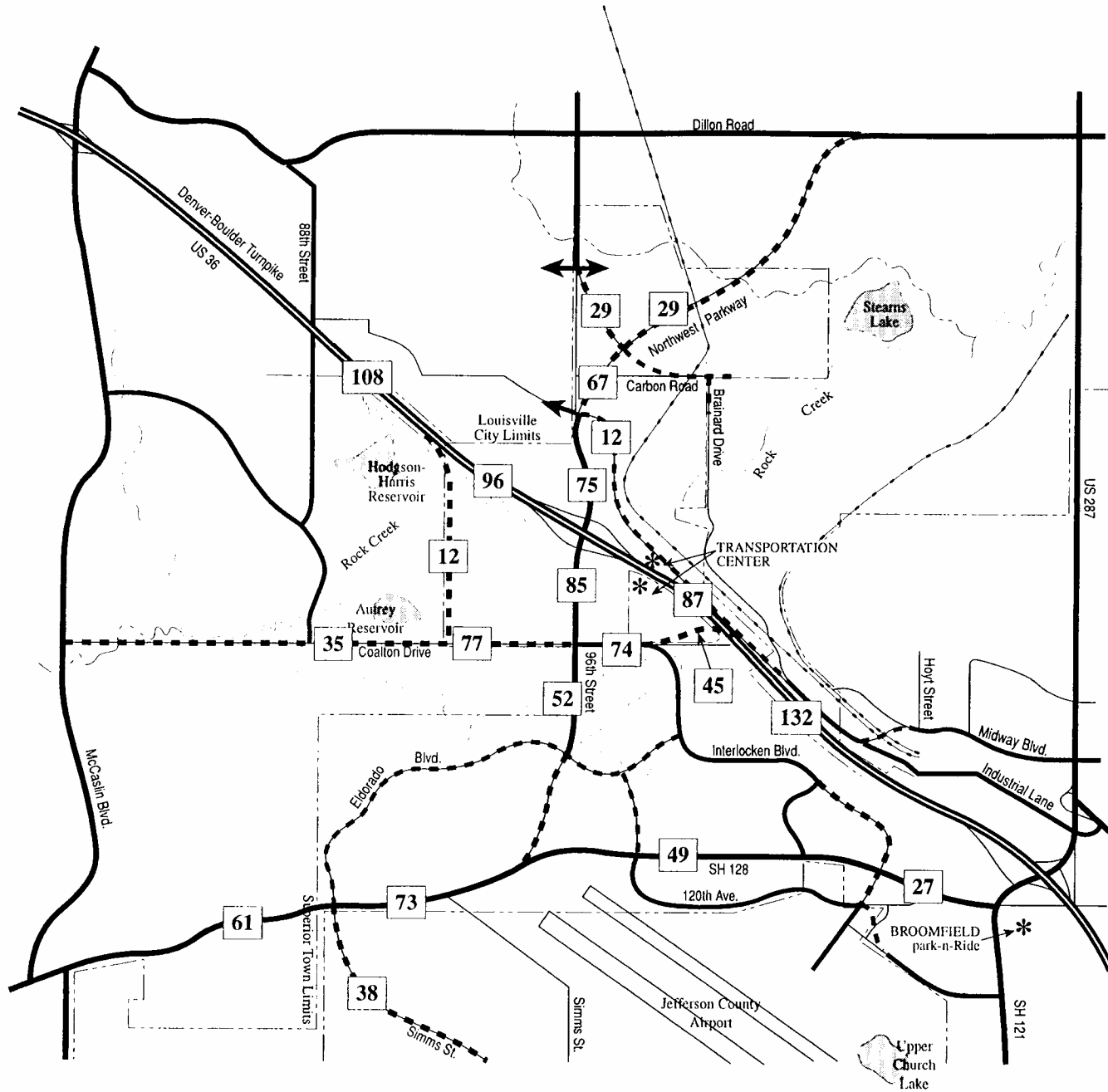


Figure 10
Alternative 1

Buildout / 2020 Traffic Forecasts (in thousands)



7.2 Alternative 2 - Directional Interchange Using Coalton Drive Relocated to the North

Two variations of the alternative were developed to address the concerns about high traffic volumes at the intersection of 96th Street and Interlocken Boulevard/Coalton Drive. Coalton Drive would be realigned to the north so that it could utilize the same grade separation/interchange that would be built to provide access to the mall and other commercial property. This would create a separate road for the Regional Mall and Superior traffic so that most of these vehicles would not need to travel through the 96th Street intersection at Interlocken Boulevard/Coalton Drive.

7.2.1 Alternative 2A - Directional Interchange using Coalton Drive relocated to the north with diamond ramps on 96th Street (Figure 11)

Alternative 2A shows a half diamond interchange (see Figure 10). The location of the grade separation for this interchange configuration would be shifted to the south in order to get adequate separation from the US-36 interchange. There is not adequate separation to Interlocken Boulevard/Coalton Drive to provide corresponding ramps to and from the south. With this configuration, 96th Street would need to be raised so that the relocated Coalton Drive would have

sufficient clearance underneath.

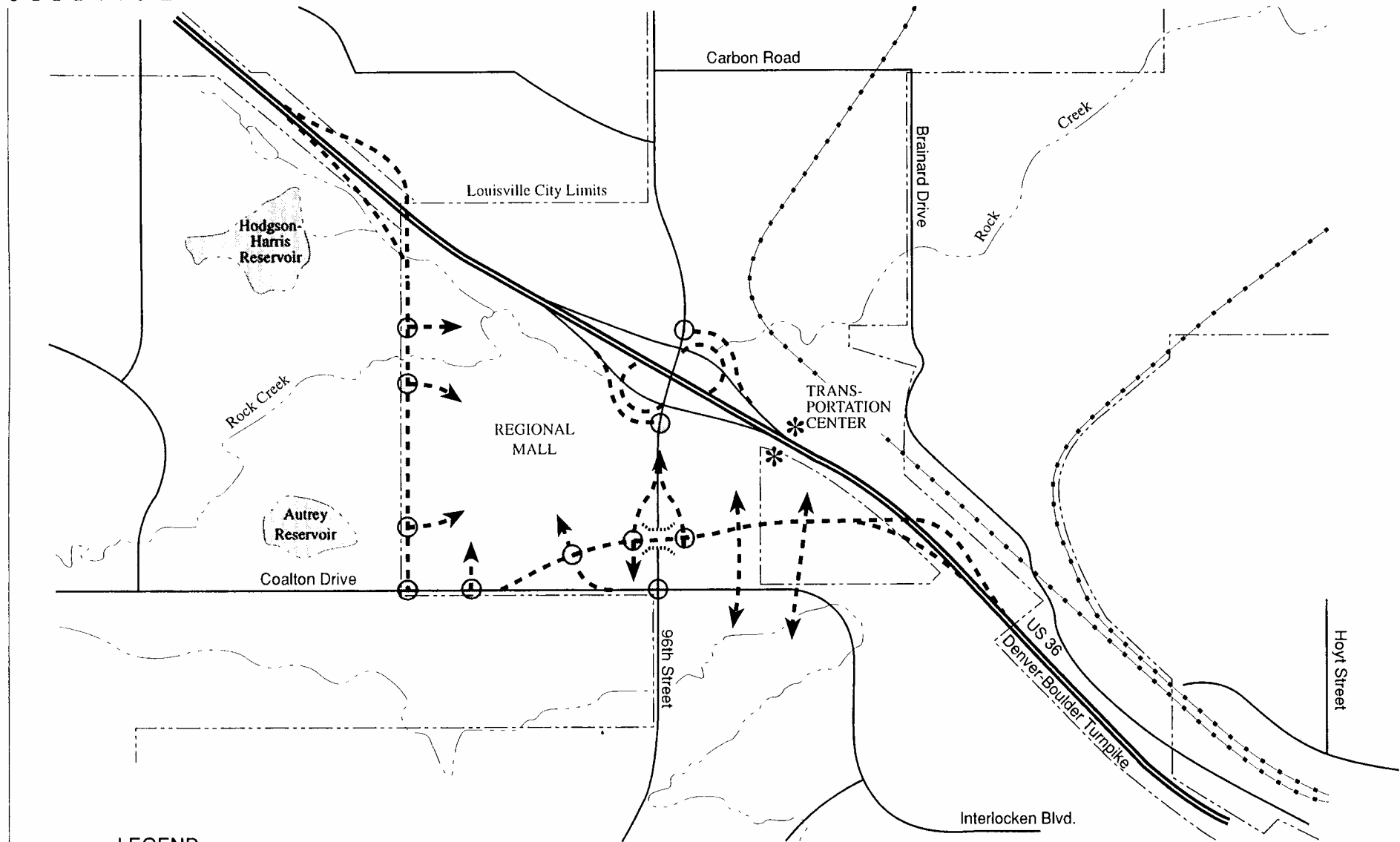
Advantages:

- The grade separation would be an underpass which would minimize the visual disruptions from the new road.
- Diamond ramps would leave more developable land on each side of 96th for Mall and Midland/Stanger
- Maximizes traffic utilization of new grade separation by making this the easiest path for Superior traffic - in addition to the Regional Mall, Midland/Stanger, and Transportation Center traffic - to get to/from the east (Denver) on US-36 (also common to Alt. 2B)
- Helps reduce traffic congestion at 96th & Interlocken/Coalton by providing an alternative route for Superior traffic (also common to Alt. 2B)

Disadvantages:

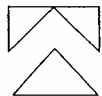
- Diamond ramps would not allow full movement access. Access would be to/from the north on 96th Street only

FELSBURG
HOLT &
ULLEVIG



LEGEND

- - - - - = Future Roadway
- = Potential Traffic Signal



North

Figure 11
Alternative 2A

- Diamond ramps would provide limited traffic operations because of minimal maximizing separation (and weaving distances) to a future partial cloverleaf at US-36. Heavy right turn from eastbound US-36 to southbound 96th would need to be signalized (not be a free right turn) to minimize weaving problems with southbound traffic from further north. There would not be a way to reduce weaving problems for northbound traffic because all phases of the signal at 96th & Interlocken/Coalton would be fully utilized.
- Increased disruption to the Regional Mall, Midland/Stanger, and Transportation Center from non-site traffic (Superior traffic on relocated Coalton) (also common to Alt. 2B)

Costs: (not including ROW and Landscaping)
 Alternative 2A Specific
 Improvements: \$4.5 - \$5.5 Million
 (in addition to cost of
 directional interchange)
 Potential Total Costs: \$10.5 - 12.5 Million

Traffic Forecasts: See Figure 12

7.2.2 Alternative 2B - Directional Interchange using Coalton Drive relocated to the north with loop ramps on 96th Street (Figure 13)

Alternative 2B (see Figure 11) shows the same partial cloverleaf configuration as depicted in Alternative 1 (Figure 9). The main difference between Alternatives 2A and 2B is the location of the grade separation and how the relocation of Coalton Drive would affect the Regional Mall parcel.

Advantages:

- Loop ramps would allow access to/from all directions of 96th Street and also relocated Coalton Drive
- Loop ramps would provide best traffic operations by maximizing separation (and weaving distances) to a future partial cloverleaf at US-36.
- Maximizes traffic utilization of new grade separation by making this the easiest path for Superior traffic - in addition to the Regional Mall, Midland/Stanger, and Transportation Center traffic - to get to/from the east (Denver) on US-36 (also common to Alt. 2A)
- Helps reduce traffic congestion at 96th & Interlocken/Coalton by providing an alternative route for Superior traffic (also common to Alt. 2A)

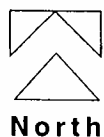
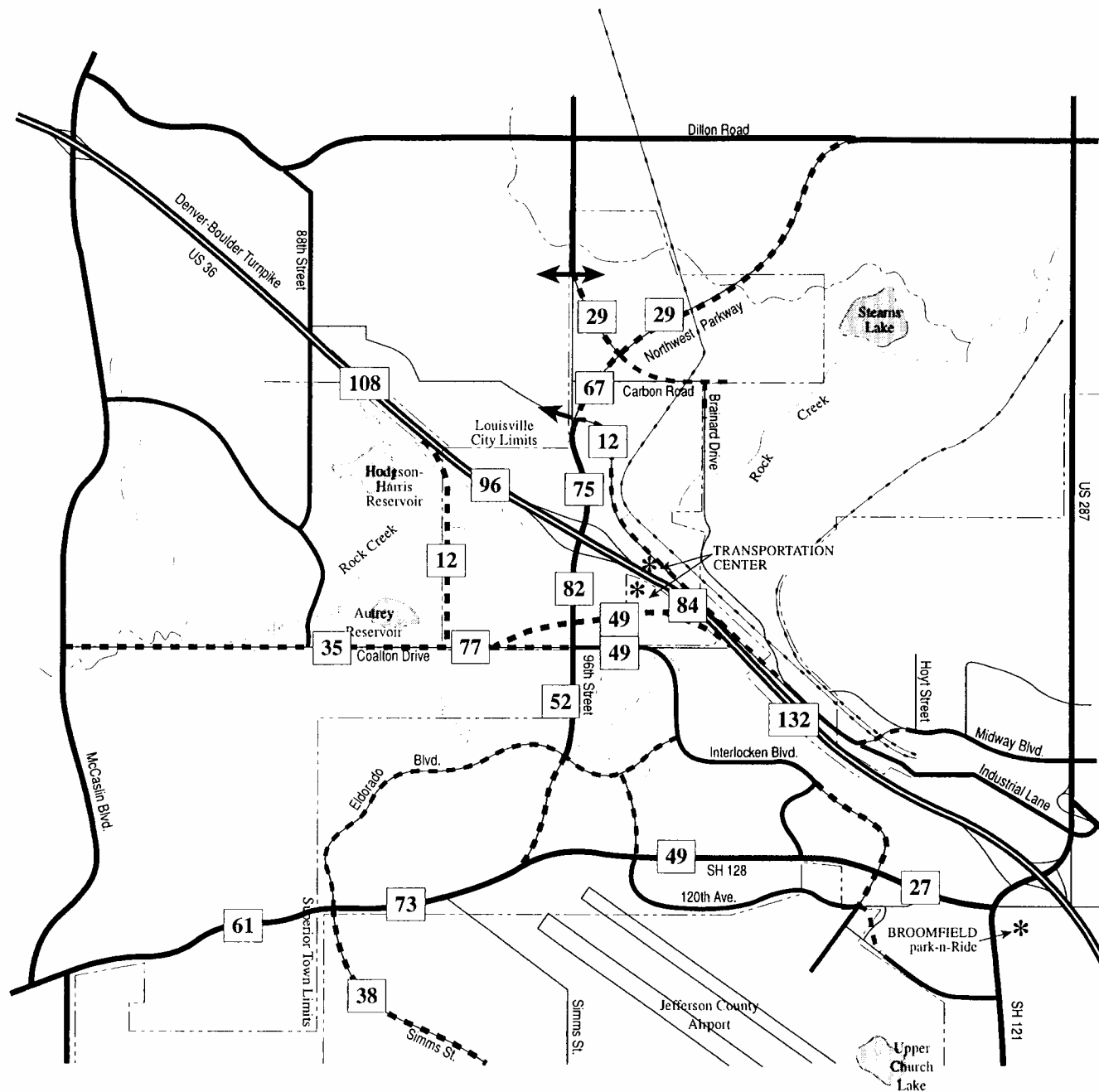
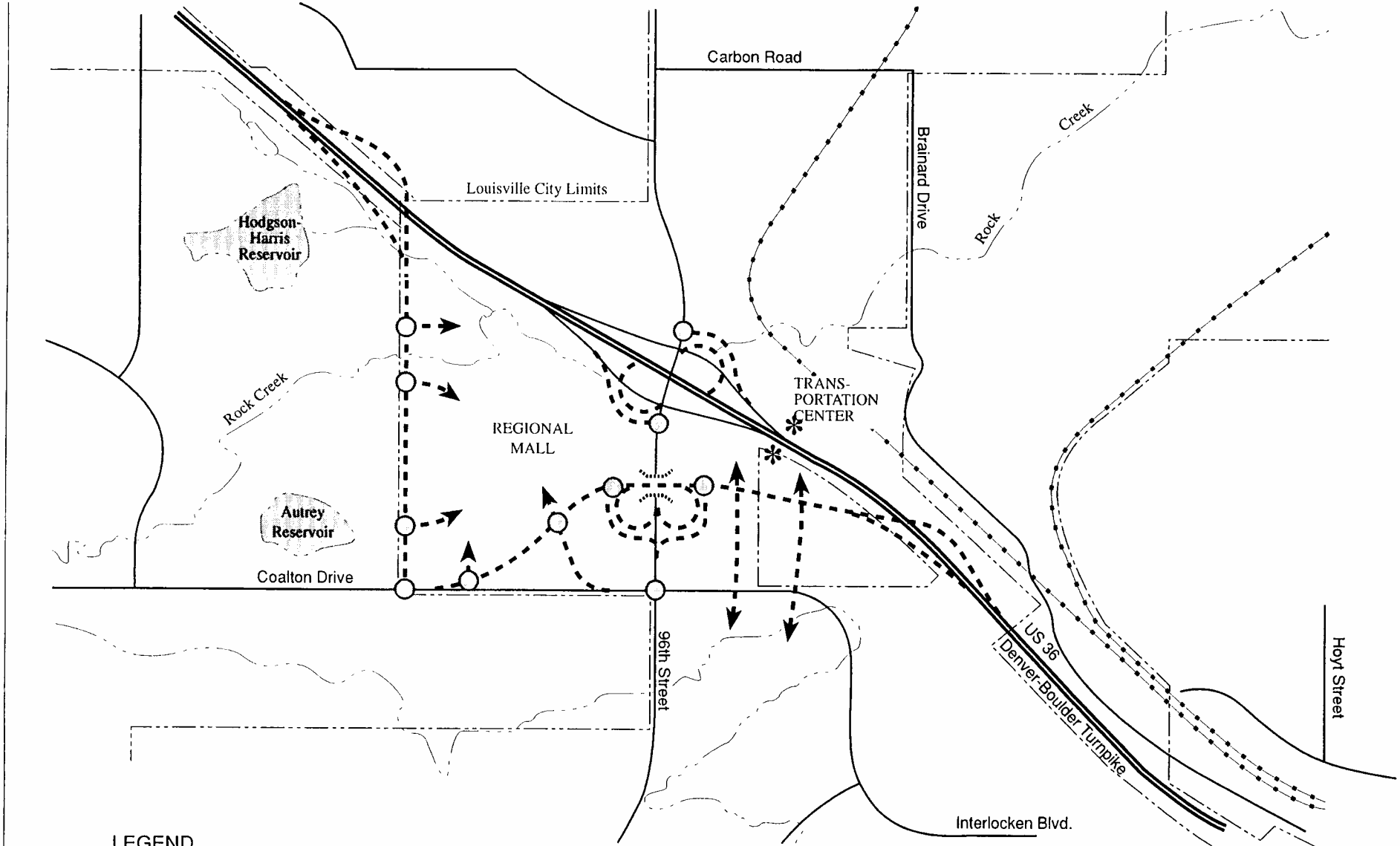
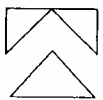


Figure 12
Alternative 2A & 2B
Buildout / 2020 Traffic Forecasts (in thousands)



LEGEND

- = Future Roadway
- = Potential Traffic Signal



North

Figure 13
Alternative 2B

Disadvantages:

- The grade separation may be an overpass (potential aesthetic problems) unless there were extensive regrading of the Mall and Midland/Stanger sites on each side of 96th.
- Loop ramps take more developable land from the Regional Mall and Midland/Stanger property
- Increased disruption to the Regional Mall, Midland/Stanger, and Transportation Center from non-site traffic (Superior traffic on relocated Coalton) (also common to Alt. 2A)

Costs: (not including ROW and Landscaping)

Alternative 1 Specific

Improvements: \$6 - \$7 Million

(in addition to cost of directional interchange)

Potential Total Costs: \$12 - 14 Million

Traffic Forecasts: See Figure 12

7.3 Alternative 3 - Braided Ramp Interchange

The final preferred configuration for a new interchange on US-36 has a diamond configuration with braided ramps. The new interchange would be located at 92nd Street on the west side of the Regional Mall parcel. Because this would be less than one mile from the existing interchange, there is not adequate separation to have proper weaving distances. The on- and off-ramps between the two interchanges would need to be "braided", that is, a bridge would be built to take one ramp over the other.

Advantages of Braided Ramp Interchange:

- Provides a second north/south arterial parallel to 96th Street (on 92nd Street alignment) for Mall and Superior traffic.
- Could have direct access to StorageTek
- Doesn't affect Interlocken PUD
- New interchange could be shifted east to avoid Louisville and Superior land if necessary. This would reduce the developable

land for the Mall .

Disadvantages of Braided Ramp Interchange:

- 92nd Street might not be well used by the Regional Mall and Superior traffic to/from the east (Denver) because of extra distance and possible perception of out-of-direction travel
- Would need careful signing - to direct Mall and Superior traffic from Denver to use new 92nd Street.
- Couldn't reconstruct 96th Street to partial cloverleaf configuration.
- More expensive to construct and more ROW would be required than directional ramp interchanges
- Potential disruption to Rock Creek and riparian areas on both sides of US-36
- Approval process may be more difficult because of two closely spaced interchanges.
- Does not lend itself well to phased implementation

Basic Cost of Braided Ramp Interchange:

\$10 - \$12 Million (not including ROW and Landscaping)

7.3.1 Alternative 3A - Braided Ramp Interchange with local access along 96th Street (initial phase of Alt 3B) (Figure 14)

Figure 6 shows Alternative 3A, which might be an initial phase of implementation of the braided ramp concept. Limited access to adjacent property along 96th Street would be allowed south of US-36. The spacing on 96th Street between the south ramp intersection and Interlocken Boulevard/Coalton Drive is approximately 1900 feet. This distance is too close to allow a new signalized intersection because it would adversely affect through progression and traffic operations. Access to adjacent properties would be limited to right-in/right-out only with the possibility of left in-only movements being allowed.

Advantages:

- Lower initial construction costs

Disadvantages:

- Only partial turning movements would be allowed along 96th Street - right-in/right-out and left-in only for Mall and Midland/Stanger
- Significant traffic is concentrated at 96th & Interlocken/Coalton. Alternative 3B would ultimately be required to handle traffic at 96th & Interlocken/Coalton

Costs: (not including ROW and Landscaping)

Alternative 1 Specific

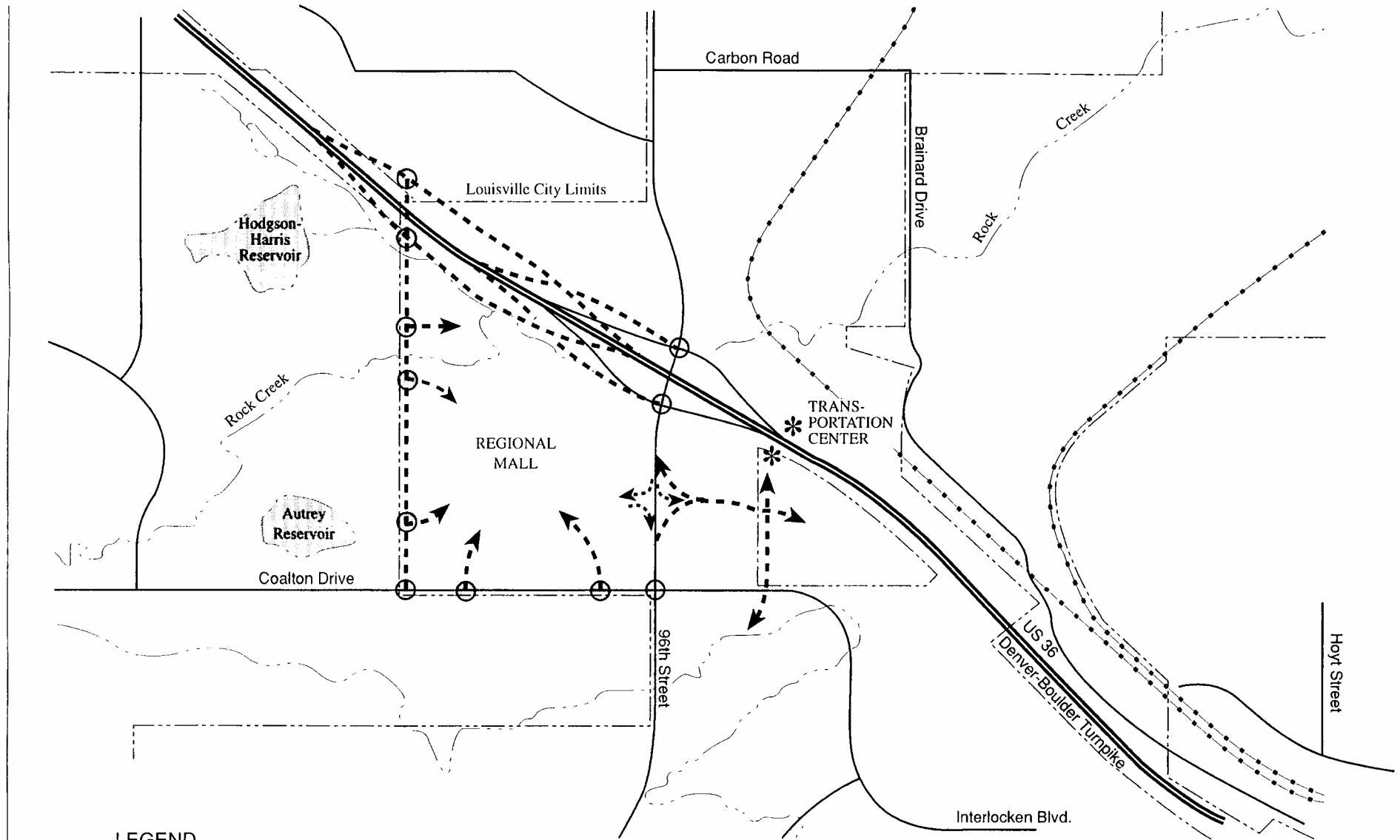
Improvements: \$0.5 - \$1 Million

(in addition to cost of

braided ramp interchange)

Potential Total Costs: \$10.5 - 13 Million

Traffic Forecasts: See Figure 15



LEGEND

- - - - - = Future Roadway
- = Potential Traffic Signal

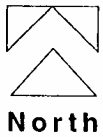


Figure 14
Alternative 3A

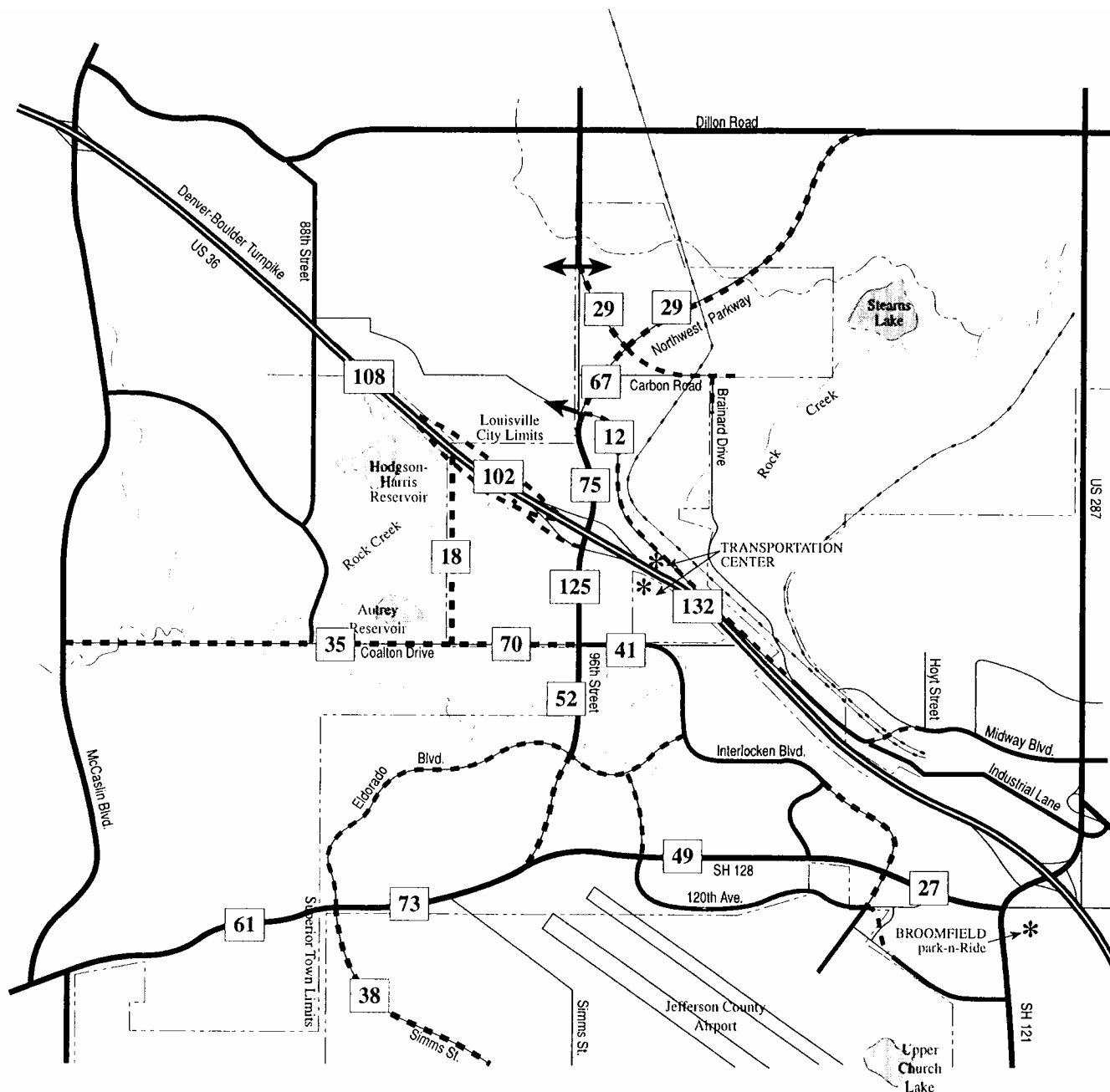
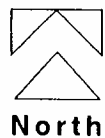


Figure 15
Alternative 3

Buildout / 2020 Traffic Forecasts (in thousands)



7.3.2 Alternative 3B - Braided Ramp Interchange with new urban interchange at 96th Street and Interlocken Boulevard/Coalton Drive (Figure 16)

When the traffic volumes on 96th Street (particularly at the intersection with Interlocken Boulevard/Coalton Drive) reach a level that the intersections and access points are no longer able to handle it or improvements along the Northwest Parkway corridor dictate, a single-point, urban interchange should be considered at the Interlocken Boulevard/Coalton Drive intersection. Alternative 3B (see Figure 7) shows how this interchange could be configured so that 96th Street/Northwest Parkway would have free-flowing traffic. The ramp intersections with Interlocken Boulevard/Coalton Drive would be under the grade separation bridge. The topography is such that an overpass for 96th Street will fit with the grades along 96th Street as it comes down the hill to US-36. This new interchange would require that the interim phase right-in/right-out movements be removed.

Advantages:

- Urban interchange at 96th & Interlocken/Coalton would be best

configuration to handle all turning movements concentrated at this location

Disadvantages:

- No direct property access would be allowed to/from 96th St. between US-36 and Interlocken/Coalton.

Costs: (not including ROW and Landscaping)

Alternative 1 Specific

Improvements: \$10 - \$12 Million

(in addition to cost of

braided ramp interchange)

Potential Total Costs: \$20 - 24 Million

Traffic Forecasts: See Figure 15

8.0 FINAL ROADWAY SYSTEM CONFIGURATION

Alternative 2A was determined to be the preferred alternative, and the decision process is summarized in Figure 17. Several refinements were made to the relocated alignment of Coalton Drive and the interchange with 96th Street. The preferred roadway network is shown in Figure 18.

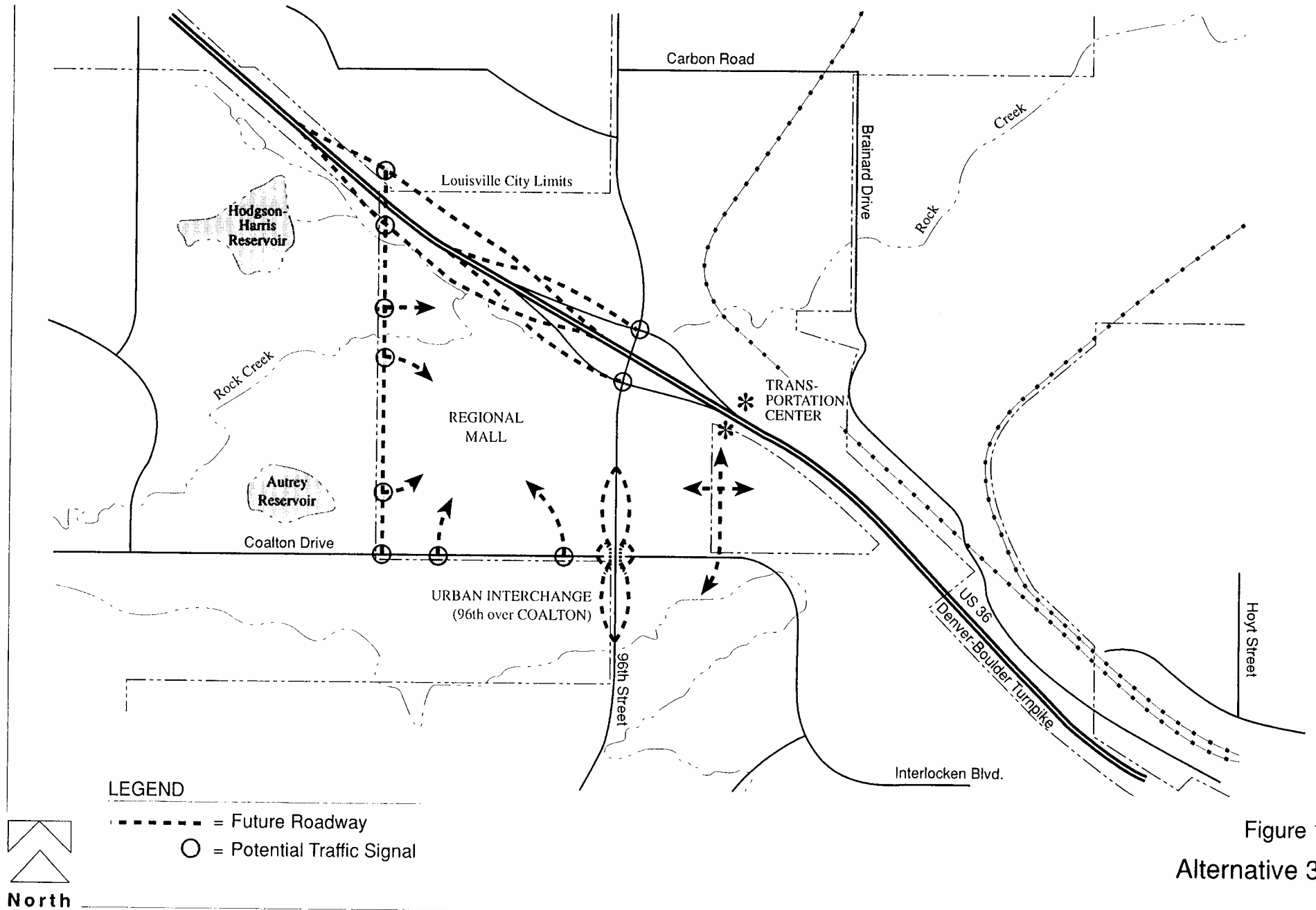
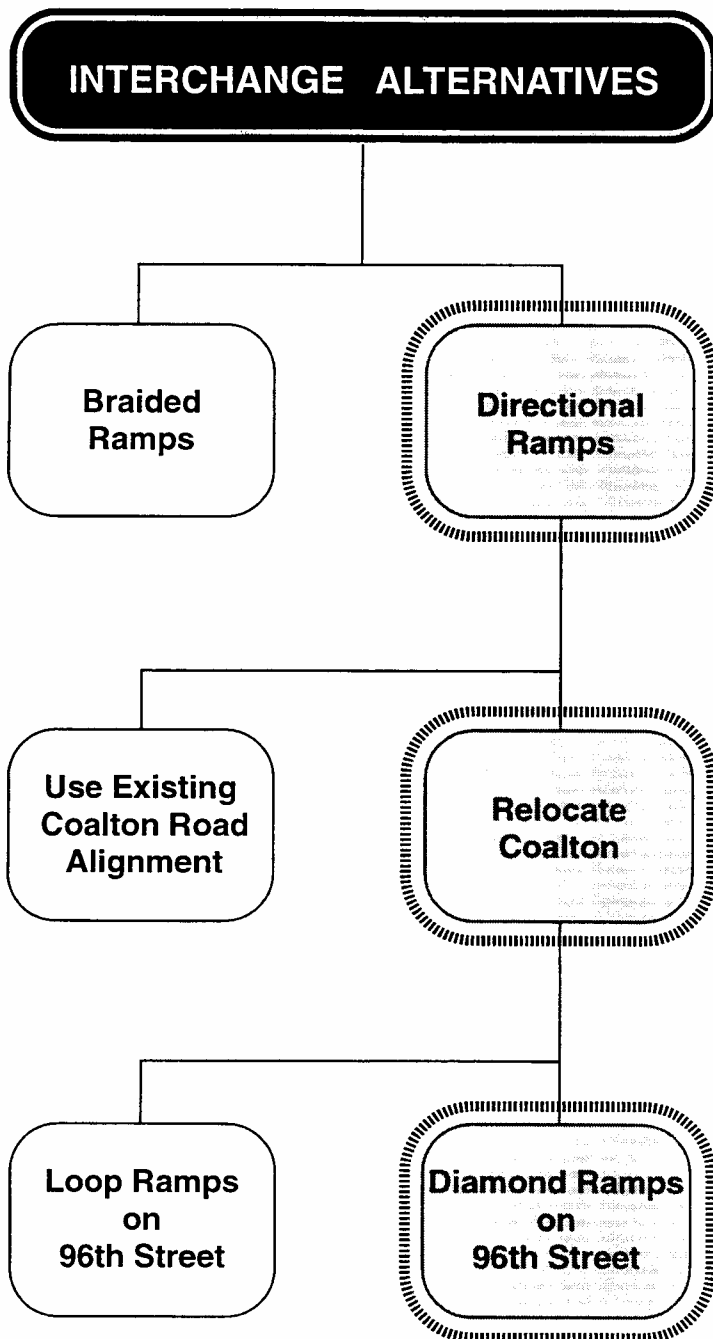


Figure 16
Alternative 3B



- Overpass
- Full movement access
- Takes more land for loops
- Better for traffic operations on 96th St.

- Underpass
- Access from north only
- Takes less land
- Not as good for traffic operations on 96th St.

- ◆ Less expensive
- ◆ More capacity
- ◆ Meets driver expectancy
- ◆ Can expand existing interchange to Parco in future
- ◆ Can be implemented in phases
- ◆ Maximizes utilization of new grade separation
- ◆ Reduces volumes at 96th & Interlocken / Coalton
- ◆ Preserves function of Interlocken Boulevard
- ◆ Maximizes developable land along 96th Street
- ◆ Underpass is better aesthetically for adjacent properties

Figure 17
Interchange Decision Process

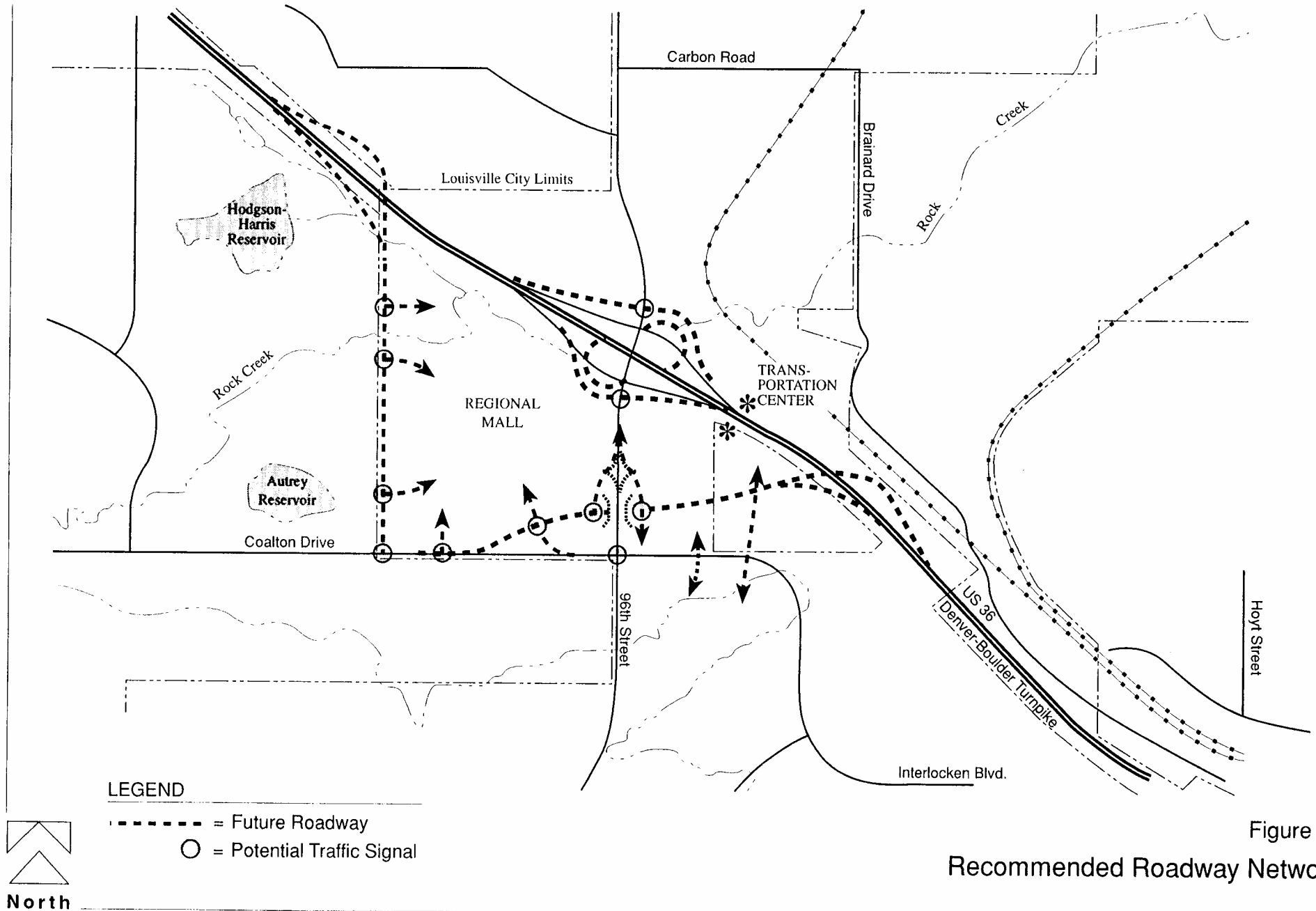
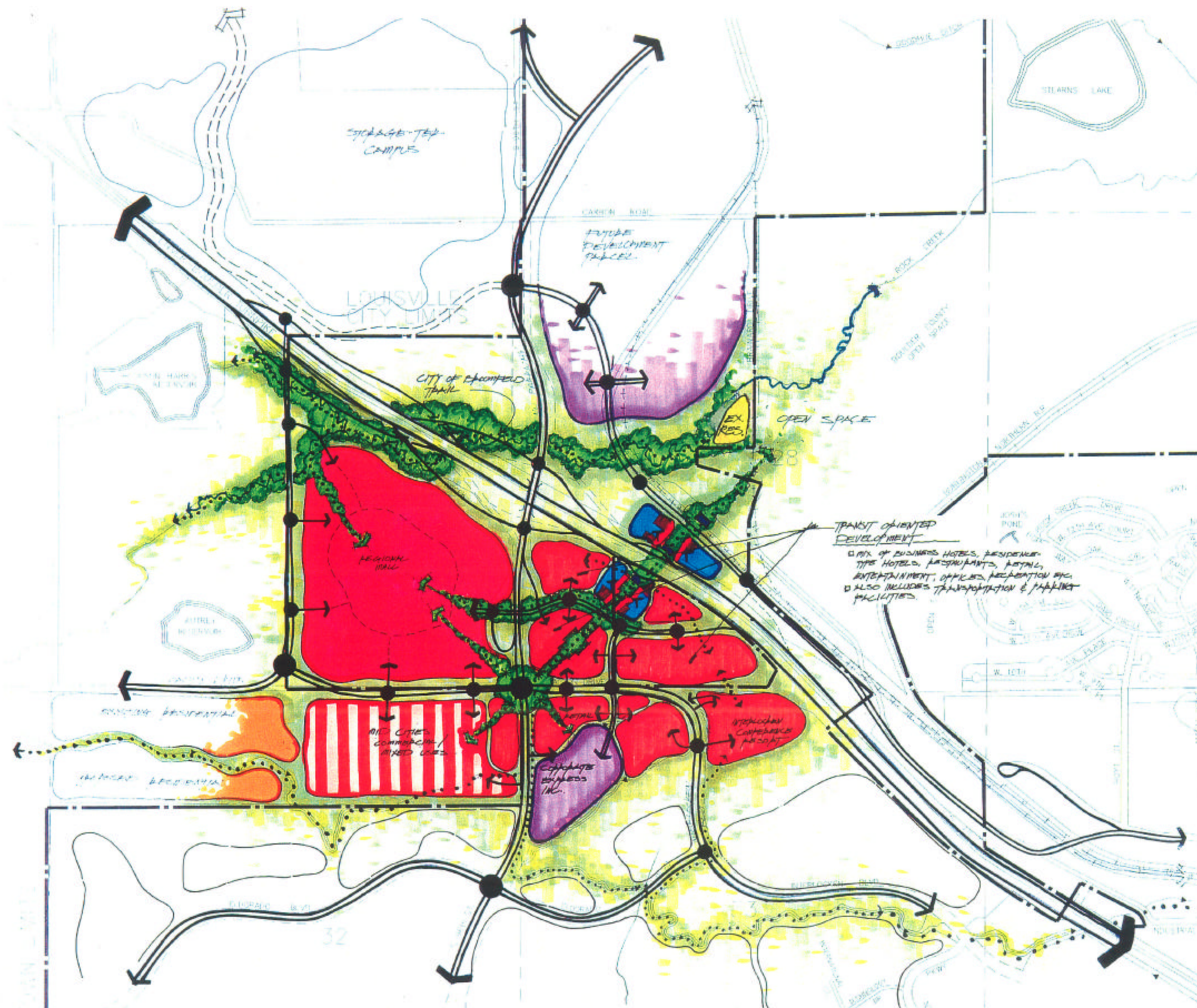


Figure 18
Recommended Roadway Network



**DOWNING
THORPE
JAMES**

ARCHITECTURE
PLANNING
LANDSCAPE ARCHITECTURE
ENGINEERING

1881 North Street, Suite 103
Boulder, Colorado 80302
303-443-7533

**FELSBURG
HOLT
ULLEVIG**

TRANSPORTATION ENGINEERING

303-721-1440

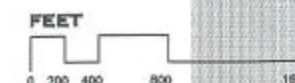
**CHARLIER
ASSOCIATES, INC.**
TRANSIT SYSTEMS PLANNING
303-449-1903



City of Broomfield

**U.S. 36
SUB-AREA PLAN**

**US 36/96TH
STREET MIXED-
USE SUBDISTRICT
CONCEPT 3-C**



DATE: 4/22/97

